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ABSTRACT

This publication identifies and discusses crucial issues related to the role of credentialling and certification procedures in the functioning of educational systems. Part 1 analyzes in detail selection and credentialling practices as they affect the functions and objectives of the various levels of formal education systems. Part 2 focuses on the different purposes credentials serve for individuals, various interest groups, and society as a whole and discusses employers' attitudes toward credentials as evidenced by their recruitment and promotion practices. Part 3 examines how the trend toward professionalization and the efforts of different occupational groups to maintain their bargaining power influence training and certification. (Author/JG)

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SELECTION AND CERTIFICATION IN EDUCATION AND EMPLOYMENT

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TABLE OF CONTENTS

Preface 5

Part One

SELECTION AND CERTIFICATION
IN FORMAL EDUCATIONAL SYSTEMS

I. INTRODUCTION 7

A. Scope 7
B. Definition of Terms 7
C. Certification : an important Social Function 8
D. Certification : a Variety of Dysfunctions 10
E. Pressures and Dilemmas facing Educational Systems . 12

II. SELECTION AND CERTIFICATION AT VARIOUS LEVELS OF THE EDUCATION SYSTEM 17

A. An overview 17
B. First Stage of Compulsory Education 19
C. Lower Secondary Education 20
D. Upper Secondary Education 23
E. Post-secondary Education 33

i) Diversity in patterns of development 33
ii) Admission policies 40
iii) Structures : towards an "aggregative" model of higher education 58
iv) Certification in post-secondary education . . . 61

Part Two

USES OF CREDENTIALS IN EMPLOYMENT

I. INTRODUCTION 69
II. THE USES OF CREDENTIALS 71

III. THE DEVELOPMENT OF EDUCATIONAL CREDENTIALS AS AN INFORMATION SYSTEM FOR EMPLOYERS 75
IV. THE ABUSES OF CREDENTIALS 77
V. THE PROCESSES OF RECRUITMENT AND CAREER PROMOTION . . . 81
VI. ECONOMICS OF CREDENTIALISM 87
VII. CONCLUSIONS AND FURTHER QUESTIONS 92

Part Three

THE ROLE OF CREDENTIALS
FOR ENTRY INTO CERTAIN PROFESSIONS

I. CREDENTIALS AND CREDENTIALLING 95
II. INTEREST GROUPS 97
III. THE PATHOLOGY OF CREDENTIALLING - "CREDENTIALISM" . . . 100
IV. STRUCTURE OF THE REPORT 102
V. COMMON KNOWLEDGE AND TASK STRUCTURE 105
VI. COMMON POLITICAL AND ACADEMIC STRUCTURES AND VALUES . . 131
VII. CREDENTIALLING PROCESSES AND THEIR PATHOLOGIES 137
VIII. SUMMARY AND CONCLUSIONS 139

PREFACE

The growing importance assigned to educational credentials in occupational placement and social selection has brought to the forefront the need to review and evaluate present certification practices within educational systems and examine the ways in which these credentials are being used, or misused, by different sectors of society.

The present study attempts to identify and discuss some crucial issues that arise as a result of the dominant role which credentialling and certification procedures have come to occupy in the functioning of educational systems. It also examines the attitudes and behaviour of different social groups (e.g. employers, trade unions, public authorities, professions), who play an active role in the negotiations about the economic and social value of educational credentials in the labour market.

Part One of the report analyses in detail selection and credentialling practices as they affect the functions and objectives of the various levels of formal education systems. It discusses, in particular, the detrimental effects of having, in a situation of mass education, a selection process based on a rather narrow definition of achievement which responds primarily to the norms and standards of the top levels of the system where academic requirements and values prevail. In discussing specific issues faced by each level of education the report attempts to spell out the implications for future educational reform strategies.

Part Two, dealing with the uses of credentials in employment, focusses particulary on the issue of credentialism. It points to the different purposes which credentials serve for individuals, for various interest groups, for society as a whole and discusses more extensively employers' attitudes towards credentials as evidenced by their recruitment and promotion practices.

Part Three, endeavours to examine the ways in which the trend towards professionalisation and the efforts on the part of different occupational groups to maintain their bargaining power influence the training and certification leading to these professions. More restricted

in scope, the analysis in this part of the report is based on a selected number of professions in a few Member countries.

The report has been prepared by the Secretariat under the Programme of the Education Committee of OECD, which has approved it and recommended its publication.

The Secretariat wishes to record its appreciation to Mrs. Jean Gomm and to Professor Gareth Williams for their contribution to Part Two of the Report and to Mr. Stuart Blume for preparing Part Three.

Part One

SELECTION AND CERTIFICATION IN FORMAL EDUCATIONAL SYSTEMS *

I. INTRODUCTION

A. Scope

The central theme of this study is an analysis of the dominant role which certification and credentialling processes play in the definition and organisation of overall educational structures, in determining the interaction between the various stages and levels of such structures and, therefore, in furthering or inhibiting the pursuit of the educational, employment and broader social objectives which educational systems are designed to serve. As such, certification, together with different forms of institutional accreditation and licensing, is seen throughout the report as a key instrument of educational as well as social control and selection with a direct and significant bearing on policies and measures towards greater social relevance of the educational process and increased equality of opportunity in society.

The analysis is centered on these problems as they affect primarily the formal educational system. The second and third parts of this report deal respectively with the general use of credentials in employment and with the question of the credentialling processes within a selected group of professions or occupations.

B. Definition of terms (1)

For the purposes of this study the following definition of terms has been found useful :

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1) These definitions follow quite closely those listed in Certification and Post-Secondary Education, Commission on Post-Secondary Education in Ontario, Toronto, 1972, and in Study of Accreditation of Selected Health Educational Programmes Part I, by SASHEP, October 1971.

* This first part of the report has been written by Dorotea Furth of the Secretariat.

- certification : a process or act by which individuals are awarded educational credentials after successfully fulfilling a set of prescribed requirements at a certain educational level. In many cases it also acts as a guarantee that individuals have acquired a minimum set of qualifications for pursuing a particular profession or occupation, and/or for proceeding to the next stage of formal education ;
- licensing : a process or act by which candidates are screened for admission to a certain profession and accorded the legal right to practise that profession. Very occasionally licensing may include periodic reviews of the qualifications of existing practitioners ;
- accreditation : a process or act whereby a government department or specially constituted agency recognises the standing of an educational institution in the light of its ability to satisfy prescribed criteria. Such recognition usually confers valuable advantages upon the institution and upon its graduates. The term "formal education" primarily refers to institutions and programmes which have been accredited.

It will be noted that each of the concepts can be viewed either as an act (i.e. the delivery of an accreditation certificate to an institution, the actual awarding of a degree or of a professional licence) or as a process (i.e. the successive procedures and requirements which must be fulfilled by an individual in order to be "certified" or "licensed"). Thus the process of certification implies both the awarding of a credential as well as the essential stages which lead to it : admission, grading, tracking, examinations. This process is often referred to in the text as credentialling or formal selection. The latter term has been primarily used when these different stages are explicitly organised for screening purposes.

C. Certification: an important social function

In present industrialised societies educational certification is viewed both as a key instrument of control and information and as a central mechanism of social selection.

In its more manifest control function, educational certification, together with different forms of licensing and institutional accreditation, is a means of regulating the quality of education and training provided, thus serving to inform and protect the public both as consumers of education and as clients and/or employers of graduates.

Historically this function was performed mainly by guilds and professional associations which, interestingly enough, were already having to combine the potentially conflicting roles of ensuring both minimum professional standards and the protection of their members.

It is only in the course of the last century that certification has become the responsibility of a rapidly growing and increasingly formalised educational sector under stronger public control. Even more recent is the generalisation of a variety of educational credentials in the form of certificates, diplomas and degrees providing a type of compressed, portable, second-hand information. These commonly accepted measures of attainment, recognised at a regional, national or even international level, facilitate mobility and provide guidance and a minimum guarantee for recruitment into employment.

As attainment in formal education has come to be one of the best single predictors of "success" in terms of attractive positions in society, educational credentials - the more manifest link between the educational system and society - have also become central to the social selection process (1). It should be stressed at the outset that this new social role of educational certification has been used historically to replace dubious social criteria such as inheritance, family connections, ability to pay, etc., and that it is doubtful whether at present any agents other than the formal educational system could fulfil this role in a more equitable and efficient way.

Among the principal reasons which are being given to explain the growing importance of certification in formal educational systems during the past decades, are:

- the recognition of achievement as a basis for social mobility, legitimised by the meritocratic ideology;
- the concern for maintaining standards with the development of mass education;
- growing pressures from the labour market as educational systems provide many types of training previously undertaken elsewhere;
- the struggle to maintain the relative importance of organised educational systems and the power structure within these systems, especially in the face of increasing external competition due to the democratisation of access to information;
- lack of alternative agencies (and standards) to fulfil a certifying function;
- the rapid development of large bureaucratic organisations known to be the more frequent users of educational credentials.

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1) K. Eide : "Certification: Cause or Symptom", OECD document, 1974, (English text only).

Whatever the relative importance of these reasons, the net consequence has been a growing formalisation of the educational process and the proliferation of a complex set of procedures designed to sieve, sort, rank and label students on the basis of so-called "objectiv " indicators of educational achievement.

While the need for quality control and occupational allocation mechanisms is not fundamentally questioned, there is nonetheless growing criticism of the present organisation of the educational certification process and the way it is fulfilling, sometimes monopolising, these functions. Critical reactions respond to different trends of thought, reflecting the concern for the detrimental effects of certification on the educational system as well as for its implications for broader social issues.

D. Certification : a variety of dysfunctions

Criticisms of current selection and certification practices reflect at least four different viewpoints:

a) The egalitarian perspective

i) experience of the fifties and sixties has amply revealed the existence of what may be called an "iron law of educational selection". All selection mechanisms based on the usual indicators of educational performance are invariably biased by factors related to the students' social and cultural background and thus necessarily help to maintain the existing social structure and its dominant values;

ii) as growing numbers of students reach a certain level of education, the "stigmatising" effect on the minority who are left out increases;

iii) growing formalisation and emphasis on credentials has become an obstacle to many young people and adults who genuinely wish to better themselves through education, but are prevented from doing so because they lack formal qualifications often irrelevant to their chosen area of study;

iv) many also claim that the emphasis on certification has contributed to the widening of the "generation gap". Young people benefit from more formal education and also receive formal credentials for the acquisition of knowledge and skills not "certified" in the past. Often the condition of older workers is aggravated by the lack of alternative ways of legitimising knowledge and competence acquired outside the formal educational system;

b) The "pedagogical" perspective

v) undue concern for the principles, methods and criteria governing the organisation of selection and certification - both on the part of students and teachers - is often considered to be highly detrimental to the actual learning process. It also conflicts with some of the basic psychological and social objectives of present educational systems;

vi) since educational credentials are more and more perceived as an essential - although not a sufficient - requirement to enter well-paid and satisfying jobs, they tend to accentuate the phenomenon of attendance without motivation, particularly among middle and upper-class students who are under strong parental pressure to pursue their studies towards a university degree, thus putting an additional strain on students and educators alike;

vii) the present credentialling system stresses selection by failure by tending to equate competence with formal credentials. This has important psychological and sociological implications since the only way of leaving any formal education cycle with honour is to acquire the corresponding diploma; those not obtaining one being considered by others as well as by themselves, as "unqualified" or incompetent;

c) The employment perspective

viii) criticisms stemming from this point of view are seldom directed against the selection and certification functions of the educational system per se, but mostly question the efficacity of current credentialling practices, which may be based on criteria considered irrelevant to the requirements of employment;

ix) even more important in explaining the recent concern for present credentialling practices has been the inability to provide jobs meeting the expectations and aspirations of a growing number of young people with high levels of educational attainment. In most OECD countries the supply of graduates in recent years has far exceeded the growth in the number of jobs that traditionally required such levels of qualification - a situation which has created underemployment and frustration, particularly among those entering employment with general degrees;

d) The "public interest" perspective

x) there is a similar claim of irrelevance from wide sectors of society which consider that many of the standards and criteria used are not pertinent to the future roles of individuals as effective citizens;

xi) there is also the view that all too often the certification process is organised so as to serve the interests of specific groups concerned with raising the economic and social value of acquired credentials rather than the public in general.

In spite of the differences between these arguments, they all seem to converge in viewing critically the linear or unidimensional character of the selection process within educational systems. Insofar as this is a process essentially concerned with the identification of only certain dimensions of talent, it results in the adoption of a rather narrow definition of achievement which attaches high value to general and theoretical knowledge and capabilities and underrates practically-oriented skills and abilities. In this way the system is led to stratify individuals along a prestige hierarchy criticised both on efficiency and egalitarian grounds.

The prevalence of this narrow concept of achievement has often been justified for technical reasons. Even if it is recognised that a variety of attitudes, motivations and non-academic talents and skills may be equally or more relevant in predicting performance in later life, their measurement and assessment pose such a complex set of problems that on grounds of feasibility the trend is to rely on the sole measure of academic or intellectual performance. This in turn leads again to the overrating of such criteria.

E. Pressures and dilemmas facing educational systems

Three major themes are developed throughout this chapter and underlie discussions on the specific issues and dilemmas faced by the various levels of the educational system. The first, only briefly discussed here in view of the extensive literature on the subject (1), refers to the various potentially-conflicting functions of the educational system : Selection, Certification and Equality. The second, particularly stressed in the present report, focuses on the problems of each cycle in defining and meeting its own internal objectives and reconciling external - primarily employment - requirements with those stemming from the succeeding levels of the

1) See especially : T. Husén : Social influences on Educational Attainment, OECD (CERI), 1975. T. Husén : Talent, Equality and Meritocracy, Project Europe 2000, Martinus Nijhoff, the Hague, 1974.

educational system. This has been referred to as the transfer/terminal dilemma. Thirdly, and directly related to the above, are the problems deriving from the overriding influence of the top echelons of the system over the educational and assessment processes of the lower levels. These problems of articulation between successive educational cycles are particularly cogent in the context of admissions policies at the post-compulsory stages.

Selection, certification and equality

At a time when educational systems have become the target of strong criticism it is important to stress that some of their present problems are not unrelated to the very success of these systems in the recent past. Confidence in education in the course of the past decades has in fact led to its being assigned a growing number of functions, often conflicting or at least difficult to reconcile, sometimes impossible of fulfilment by a single subsystem of society. On the one hand educational systems are required to continue serving as selection and certification agencies, making sure that individuals are suited to, and competent for their social and occupational roles; on the other, they are increasingly expected to provide for personal development, give everybody a fair chance, and contribute to greater social equality. In addition, with the lack of consensus as to the priority to be assigned to these functions and the changing and diverse interpretations of such key concepts as merit, competence or equality, it is hardly surprising that educational systems are not seen as adequately fulfilling many expectations of different social groups.

Some of the contradictions facing educational systems can be illustrated by reference to one central issue : the inherent incompatibility between the claim that a certain level of education should be increasingly non-selective, while at the same time it should continue playing a leading role in the distribution of jobs and roles in society. In the past, selective systems were perceived, and actually served, as upward mobility channels for individuals from lower social groups who succeeded in obtaining educational credentials reserved for a minority. But as provision at certain educational levels formerly reserved for a minority expands to include a large proportion of the age group, the immediate effect is the decrease of the relative advantages and social value of these credentials, which consequently lose their importance as a means of social selection and their influence in the distribution of

occupational roles (1). The test is then whether the use of non-educational criteria for purposes of occupational placement will lead to a less socially-biased recruitment and career promotion procedure.

Paradoxical as it may seem, once a level of education has encompassed the majority of the population and its credentials are perceived to lose their value, attendance tends to become quasi-compulsory for larger sectors of the population. The last groups to enter (usually the poorest) have to do so less to acquire a benefit than to avoid being penalised. At this point the importance of credentials lies in their power to discriminate against the minority who do not have them. Although not sufficient for job allocation purposes, they are essential for entering the competition for jobs. Like all inflationary spirals, when the majority reaches a target which does not ensure any relative benefits, the result is that those who aspire to differentiate themselves try to seek entry into the next level of education. Only so long as a particular level remains selective will the corresponding credentials play a role in the subsequent distribution of jobs.

ii) Selection and certification as control functions of the educational system: the transfer/terminal dilemma

Although the standards and values underlying existing certification practices are under growing attack, it should be pointed out that they continue to underlie the principles of the division of labour in present industrialised societies, which award the highest premium and prestige to conceptual and organisational work while more practical activities are ranked at lower levels. It is often stressed therefore that many of the features of present forms of certification are primarily due to the requirements of the prevailing pattern of work organisation and thus extremely difficult to change. This argument is often counterattacked in the employment world where it is claimed that present certification practices all too often act as a main obstacle to changes in work organisation.

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1) For a very perceptive discussion on these issues see : T. Green and E. Haynes: "Notes towards a general theory of Education Systems", Educational Policy Research Centre, Working Draft, 1972.

A more "conflict"-oriented interpretation derives from the argument that because educational systems are a key instrument in ensuring the reproduction of the prevailing social structure, they must necessarily adopt a social definition of achievement that favours the maintenance of power and prestige of privileged groups. Within this line of thought there is often a trend to neglect certain "change oriented" functions of formal education and underestimate the process of democratisation which - although much slower than foreseen - has actually taken place in the course of the last decades. More important, it pays little attention to the dynamic capacity and readiness of privileged groups to respond quickly to changes in the definition of achievement and selection criteria, and to succeed in maintaining their advantages, whatever selection procedures may be adopted.

A third interpretation particularly stressed throughout this report is that the educational system itself bears a major responsibility for present certification practices and for reinforcing the prevailing value structure. According to this perspective, selection and certification are seen as essential internal mechanisms for organising and controlling the educational systems themselves and are thus strongly geared to respond to the norms and standards of the academic milieu.

By enabling exchange and communication both between the various levels of education and between institutions, credentials and awards make the existence of an educational system possible. Secondly, selection and certification procedures are functional for the operation of education systems as large and complex bureaucracies ; they are essential elements of institutional control, both in the macrosense of controlling numbers, flows, etc., and in the microsense of controlling what goes on in the classroom. Thirdly, selection and certification procedures as presently organised, enable the top levels of the educational hierarchy to exercise control over the lower levels through their power to stipulate the qualifications required in order to proceed from one stage to another ; this power is particularly strong when student demand for a certain type or level of education exceeds supply, and entry becomes highly competitive.

The difficulties in reconciling the social and self-serving functions of the educational system are best illustrated by what can be referred to as the transfer/terminal dilemma. One of the major achievements of the past decades has been the elimination of many terminal programmes or dead-end tracks, particularly at the lower levels of education, and the development of comprehensive cycles allowing for greater openness and permeability throughout the system.

Education of this type has not, of course, solved all the problems and has given rise to new ones, in many ways related to the internal dynamics of the educational system referred to above.

A major feature of comprehensive cycles which precede an exit point from the system is that they combine two functions previously fulfilled separately by different tracks. On the one hand they have to prepare students who leave formal education, at least temporarily, to assume a variety of roles in society, particularly in employment; on the other, they are required to train, and most often to select, students for the next level of education.

The result in practically all cases has been that the latter function has acquired a dominant role, so that curricula and assessment practices tend to be geared primarily to meet the requirements of those who want to transfer to the next level, even if for a considerable number of students - sometimes the majority - the education is terminal.

Thus, support for policies aimed at eliminating terminal programmes and providing opportunities for further studies at different levels, has to make a realistic assessment of the probable risks or negative consequences of developing educational cycles which are both transfer-and terminal-oriented. One such risk, for example, may be that of maintaining a sense of failure among large sectors of the student population who do not continue their education. While in terminal-oriented streams the educational system was justifiably held responsible for blocking opportunities, the ideology underlying comprehensive types of education tends to stress the individual's responsibility for leaving the system; it is his decision or his failure in meeting certain standards which determines his departure or exclusion. In reality the obstacles are inherent in the operation of the system itself which, by virtue of its transfer orientation, defines standards in such a way that they very often bear less relation to the specific goals of the cycle that the students attend than to the requirements set by the next level of the educational process. Exits from the system tend to be perceived as failures to proceed further rather than as successful completion of a given stage. This leads to the third and closely related theme.

iii) Articulation between the successive stages

As each level of education shapes its activities very largely in the light of the qualifications required by the succeeding level, its assessment methods and criteria depend to a large extent on decisions taken at the higher levels of the system. This chapter therefore discusses quite extensively the admission policies of the

post-compulsory stages and the consequences of ongoing changes for the selective and certifying role of the preceding levels. Particular attention is focused on the more restrictive sectors considered to be the pace setters of the system.

Finally it should be stressed that while no doubt some of the major issues today in education cannot be tackled - much less solved - within the school boundaries, it would be misleading as well as dangerous to fall into the other extreme and underestimate the potential of the educational system itself to deal with some of these issues. Even if it is recognised that inequalities in education will persist as long as there are inequalities in the broader social system and that the reasons for the subtle forms of selection and self-selection are very often to be found beyond the realm of schools, there is ample evidence of the impact which policies and measures taken within the educational system have had upon these inequalities. In this sense, the various rules and procedures determining admission, promotion, distribution and exits throughout the system may be considered to play a central role in promoting or inhibiting the attainment of educational and social objectives.

II. SELECTION AND CERTIFICATION AT VARIOUS LEVELS OF THE EDUCATION SYSTEM

A. An overview

Discussions on problems and issues related to equality, selection and certification must necessarily take into account the functions and objectives of each stage of the educational process, as well as the policies concerning the linking and articulation between the successive stages. Member countries have of course different priorities, traditions and strategies in tackling similar problems ; in addition, important gaps often exist between stated policies or objectives and actual developments. However, at least with regard to primary and secondary level, in western European countries educational systems seem to be tending towards a similar organisational pattern which bears close resemblance to that of other countries which have reached a stage of quasi-universal secondary education.

This pattern can be briefly described as follows : during a first stage of compulsory education - varying from 5 to 7 years - the aim is to provide a common type of education for all pupils.

The achievement of a basic level of attainment is of major concern since it is the essential condition for avoiding early discrimination affecting future educational chances. The extension of compulsory schooling seems to result in closer integration of the two or three years of lower secondary education into this first stage. Nevertheless even in countries with comprehensive-type schooling, these early years of secondary education continue to mark the beginning of a differentiation process which varies both in relation to the criteria used and the permeability between groups or streams. Choice or assignment to a certain group or stream plus students' grades or ranking at lower secondary levels have a considerable influence on decisions about future educational and training options or leaving the system altogether.

Even if there is a growing number of arguments against extending compulsory schooling, the trend is to prolong initial formal education on a voluntary basis by increasing the capacity and diversity of upper secondary schools and decreasing the rigid, hierarchical differentiations between the options provided. Most countries maintain restricted entry into certain branches of upper secondary education but, in general, selective admission procedures are being gradually replaced by more flexible information and orientation schemes allowing a greater individual freedom of choice.

The risk, however, of upper secondary education becoming more selective, and choice of certain streams together with performance at this level having decisive and irreversible consequences for students' future educational and life chances seems indeed to be increasing in certain Member countries. As will be seen further on, this stage appears to be facing a rather uncertain future ; its objectives are not clearly defined and it is especially vulnerable to outside pressures, both from the higher levels of the educational system and from the world of work.

As a direct consequence of efforts to reduce selection during the early stages, the policy of free transition from certain upper secondary streams to post-secondary education - a long-standing tradition in most continental European countries - is tending to be gradually abandoned. With the growing number of school graduates meeting the general conditions for entry into higher education, responsibility for formal selection is being gradually shifted to post-secondary institutions. Some countries are actually favouring a break after 10 to 12 years of sequential education in order to loosen the traditional link between general upper secondary streams and higher education.

As will be shown later, there are indications that Western European countries are envisaging a series of strategies for the tertiary level which diverge considerably from the North American development pattern.

B. First stage of compulsory education

In theory, at least, problems at this stage should be easier to handle since external pressures for selection and certification have diminished considerably over the past decades. The question is whether present forms of student assessment are actually responding to the pedagogical and social functions of this stage and whether, in the light of growing commitments to equality, new procedures should be more actively pursued.

In most countries a gap between stated objectives and current school practices, including assessment, still exists at the primary school stage. While policy statements and proposals for reforms argue in favour of awarding priority to individual personal development, helping students to acquire certain levels of performance through methods most likely to ensure success, promoting an atmosphere of co-operation and changing the pupil/teacher relationship, developing a capacity for independent work and initiative, fostering active participation, etc., the most commonly-used forms of assessment continue to be those which originally were designed mainly for purposes of selection. The wide array of "norm" referenced tests and examinations leading a substantial number of pupils to fail or repeat grades, the use of different ranking techniques to describe levels of cognitive achievement, even the various forms of continuous assessment which also tend to emphasize competitive performance, are clear examples of practices not only pedagogically inadequate but counter to current conceptions of personal development and egalitarian principles. Why the strong resistance to change, and what are the difficulties of operationalising these overall objectives at the classroom level? Are these competitive forms of assessment necessary to motivate students to learn, to develop self-identity by comparison with others, to identify talent and maintain teacher authority? Or are they largely determined by teachers' and parents' attitudes? Indeed the first may adhere to a system enhancing competitive performance since they themselves were socialised and succeeded within such a system. Parents may reflect the tradition within our societies of relying on competitive performance as a basis for evaluation, fearing that in its absence standards will decline.

In the search for new solutions many questions are being raised and discussed. Are teachers adequately trained and guided to assess less measurable aspects of child development ? Should they assess attitudinal aspects, and if so, how can the bias introduced by the teacher himself be controlled ? Is it true that assessment of pupils' attitudes and behaviour leads to more socially biased results than

measurements based on indicators of cognitive development? What should be the role of students and parents in these global types of assessment? What are the major factors behind the resistance to criterion-referenced modes of assessment and mastery learning? To whom should a global educational profile be communicated and for what purposes should it be used? Should educational certificates record assessment results or only contain a description of activities undertaken?

C. Lower secondary education

Even in countries like Norway and Sweden with fully established systems of nine-year comprehensive education and strong egalitarian commitments, a hierarchical differentiation of students begins to take place informally during the last years of compulsory education(1). It should be stressed that differentiation per se, either according to level or type of ability or to lines and subjects of study, does not necessarily conflict with basic principles of equality of educational opportunity ; rather to the contrary, it can be justified and supported on these grounds since it provides opportunities for students with a variety of talents, interests and skills. The problem arises when, as seems to be invariably the case, a value is attached to this differentiation, thereby converting it into a selective device for the next stage of the educational process, i.e. when a hierarchy of streams or options is established related to future transfer possibilities rather than to the internal pedagogical objectives of lower secondary education. Pupils and parents, fully aware of the implications of this stratified system, naturally help to reinforce it by competing for the right group, stream or subjects, namely those which increase their chances of choosing upper secondary streams with restricted entry, despite the fact that they might not reflect the interests or talents of the particular pupil.

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1) Extending comprehensive education has enabled a more limited use of marks during the earlier years. In Norway there is no marking up to the 6th year; in Sweden pupils are marked at the end of the spring semester in grades 3, 6 and 7 and at the end of the fall and spring semesters in grades 8 and 9.

Many problems arise from the fact that since lower secondary education marks the end of compulsory schooling, thus preceding the first major break of the educational process, it constitutes the stage when the educational system begins to assume selection and certification functions for outside purposes. From this level onwards, each cycle is to a greater or lesser extent accountable for its output to the employment sector and to the succeeding levels of the educational system. Accountability - understood in this sense - varies according to levels and types of education, but also reflects policies of different countries concerning the education-training-employment relationship and the interrelationship between the different cycles within formal education.

In most OECD countries with the extension of compulsory schooling and the trend towards comprehensive education, the screening role of the lower secondary level for purposes of employment has changed. Precisely because it now tends to enrol a majority of the age group, it is no longer a sufficient criterion for the allocation of jobs, but has acquired a negative screening value: general certificates awarded after basic or compulsory schooling now mostly serve to discriminate against those who leave the system without any qualifications or have obtained marks below the average required. In relation to the certification procedures designed for those leaving the system at this stage, a question that arises is whether educational credentials at this level could and/or should provide employers with detailed information about leavers. Should schools communicate examination, testing or other assessment results or should they restrict themselves to providing descriptive information about courses taken? Should records of non-cognitive characteristics of students be kept? Should achievement be described in global terms or various types of talents and abilities be specified? Is it possible to design a certificate which is both informative to employers and protects candidates from possible discrimination ? An examination of comprehensive education in the light of the problems posed to young people who leave the system at this stage would be of great value.

Lower secondary schools have lost their significance as selection and certification agencies for employment more rapidly than the higher levels of the educational system. Consequently at present the re-examination and reforms of assessment and credentialling procedures mainly reflect the search for compatibility between the pedagogical and personal development oriented objectives of this level and the selection requirements of the upper secondary system. This conflict of functions is of course more acute in countries aiming at reducing or eliminating the selective role of lower secondary education.

The meritocratic ideology, far from rejecting selection at this le el, has helped to justify and legitimise selective procedures based on ability and scholastic achievement. One of the supporting arguments has been that these variables were am nable to quantification and accurate measurement and thus guaranteed a certain justice and objectivity of the selection process (1). It is interesting to note that in spite of the mass of evidence showing the lack of reliability of commonly used forms of assessment i.e. wide variation between marks assigned by different teachers to a single essay or examination, confidence in so-called objective marks, although known to be based on subjective judgments and influenced by many "irrelevant" factors, remains high. In the early sixties a leading French expert on assessment techniques stated "that in order to predict the mark of a candidate it was more important to know the examiner than the candidate" (2). Concern for the selective role of assessment led to attention being focused on measures of relative performance rather than on those indicating whether students were successful in meeting minimum standards or had made progress throughout the course; defining attainment in relative terms necessarily resulted in a proportion of students falling below the standards required.

Growing awareness of the drawbacks of early selection, of the inevitable social bias of all assessment procedures based on ability or cognitive achievement, marked the development of comprehensive types of education and the search for more pedagogically-oriented and less socially-selective assessment and credentialling procedures, responding to ideologies which focus more on egalitarian goals and on pupils' personal development; witness the multiplication of various forms of continuous or cumulative evaluation, criterion referenced tests and mastery learning, concern for the global assessment of the individual, etc. The reform or elimination of certain grading and ranking procedures also points in this direction.

Not surprisingly, progress in implementing less formalised and less cognitive achievement-oriented forms of assessment at this level has been even slower than in basic education. The reforms of assessment and grading procedures not only meet with the strong internal resistances mentioned above, but are also confronted with the problem that as long as entry into certain branches of upper secondary education continues to be determined by the type of option or grades obtained at lower secondary, the latter is forced to retain a selective role and credentialling practices have to be adapted accordingly.

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1) A synthetic review and discussion of studies on the validity, reliability and predictive value of assessment methods in different countries is presented in Council of Europe: Information Bulletin, December, 1971.

2) H. Pieron: Examens et Docimologie, Presses Universitaires de France, Paris, 1963.

Thus the effectiveness of many of these reforms depends on whether they are adequately supported by admission policies at the next educational level.

In the light of these considerations two major problems call for further examination. The first relates to the whole question of links developed between the successive stages of formal education. In the past, close integration of the overall system basically meant compliance, by all levels, with a set of values and principles determined by the top echelons of the educational hierarchy. The question is whether this hierarchical control can be so weakened as to give lower levels more autonomy in defining and fulfilling their own goals and functions. Articulation would then have to be viewed in a more reciprocal perspective, implying a mutual adaptation of the various levels to the norms, values and objectives proper to each specific educational cycle. The various policy questions concerned with this issue can best be illustrated by analysing access conditions at upper secondary and post-secondary levels.

The second and closely related problem concerns selection criteria. Once the educational system formally assumes a selection function what are the conditions that have to be met so that it is considered a just and legitimate process? How can it reconcile the need both to identify talent and to ensure social equity? More specifically in view of the particular focus of this chapter, by what type of assessment methods and criteria should the selection process be guided ? These problems are discussed in the following sections.

D. Upper secondary education

i) Admission

The sharp increase in transfer rates to upper secondary education during the past two decades is indicative of a general trend to facilitate access and make provision for a wider range of full-time educational opportunities to students completing the lower secondary cycle. As a recent OECD study has shown (1), the capacity and organisational pattern of the upper secondary level still differs substantially from country to country but many of the recent reforms aim at facilitating transition to this cycle and help reduce the scope and importance of formal selection procedures at this stage.

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1) OECD : Beyond compulsory education : options and changes in upper secondary education, Paris, 1976.

Three important qualifications, however, need to be made:

a) There is still a considerable number of pupils - in many European countries a large majority - who finish compulsory schooling without any intention of return to formal education as presently organised;
b) in countries where there is no break between lower and upper secondary education, it usually means that formal or informal (drop out) selection and streaming has taken place at an earlier stage. In these cases free transition occurs within an already predetermined line of study;
c) practically all countries continue to maintain a mix of open access and restricted streams at upper secondary level. In the restricted sector, which may consist of specific lines of study, of ability groups or of specific types of institutions, entrance is organised on a competitive basis; admission requirements are as a rule strongly geared to screening "high achievers" and academically oriented students. The forms of organisation and type of selection criteria adopted by this sector have far-reaching implications for the rest of the system. They reflect in part the hierarchical nature of its organisation and its underlying value structure which are at the root of many problems confronting the development of upper secondary education.

The overall expansion of the past decades and the reforms which accompanied it have helped to blur the traditional clear-cut separation between the exclusive university preparatory sector and the terminal vocational sector ; yet by and large, systems at this level remain highly stratified. Differences is prestige are linked to type of curricula (general vs. vocational) and length of studies (long cycle vs. short cycle), but the single most important factor which continues to determine the top ranking of a stream, a group, or an institution in the prestige hierarchy is the chance which it guarantees its students of proceeding to higher education, in particular to the "noble" university type sector.

Thus practically all systems continue to have a range of terminal vocational branches preparing for employment which tend to be viewed as second choice options or as a "last chance" within formal education. On the other hand there is a growing sector of general and technical streams qualifying for further formal education. Progressively, the long cycle technical sector is adopting those characteristics which are perceived as corresponding to the norms of the traditional academic world. This implies a gradual acceptance of achievement criteria and standards as defined mainly by higher education

institutions and all too often a lack of internally defined goals and functions appropriate to this sector itself.

This phenomenon is reflected in the admission conditions to the different streams of upper secondary education. Terminal vocational streams of upper secondary education (secondary streams type b) as defined in the OECD classification (1) are usually more lenient with regard to conventional indicators of students' prior perfcrmance. But precisely because in mixed systems greater openness tends to be closely associated with low prestige, enrolments in this sector are very often not the result of free choice. Decisions to enter are mostly determined by failure to meet the access requirements of other streams, by persuasive or "realistic" school guidance or by students' own appraisal of future possibilities in the light of their past educational experience and socio-economic background. In all these cases the underlying assumption is that these are the "safest" options for potential dropouts since they are closely geared towards employment and less influenced by frequently alienating academic norms and values.

In this respect it is interesting to note how a change in the perceived prestige of certain streams may affect the composition of their respective student bodies. In Sweden, increased attractiveness of certain vocational branches (e.g. health, electronics) led high achievers to compete for entry into these branches, gradually displacing their less qualified colleagues to more generally oriented studies. This phenomenon may indicate a certain capacity of students with high achievement to maintain their advantages whenever selection is introduced and whatever the achievement criteria adopted.

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1) OECD series of Classification of Educational Systems, Paris 1972.

Secondary (a) : General or technical education offers pupils upon completion a relatively good chance of continuing their studies in a higher education establishment.

Secondary (b) : General or technical education after which pupils have little chance of continuing to higher education.

This separation of secondary education into types (a) and (b) seems preferable to the frequently-used division into lower and upper levels or 1st and 2nd cycles because in more and more cases the lower level is common to all pupils (although sometimes composed of different sections) and only at the end of this period do pupils receive final guidance and make definite choices concerning their future schooling.

Of course, evidence would be needed to prove the argument. Such a trend may have the quite positive effect of attracting the "best" students to vocational streams. It may thus contribute to breaking down the traditional prestige hierarchy within the system, especially if accompanied by equally important measures such as opening up possibilities for further education and achieving greater equality of external rewards.

Admission conditions to long-cycle general and technical upper secondary education (type a) vary from country to country and between the various streams, but practically everywhere indicators of previous educational achievement, of ability or scholastic aptitude play a decisive role. Thus, even if certificates or records of students' performance at lower secondary level may have lost their positive screening value for employment purposes, they continue to fulfil an important function within the educational system. In fact, the major constraints to bringing about changes in these educational profiles stem from the admission procedures and criteria of the restricted or more prestigious sectors which without doubt are the pace-setters of the overall system.

The choice of selection methods and criteria for entry into restricted groups or streams has been mainly determined by their effectiveness in screening those students most likely to succeed in terms of the group's norms and scholastic standards. In view of the strong academic orientation of these groups, this has resulted in the adoption of selection procedures based on a rather narrow set of criteria, likely to have predictive validity.

It is interesting to note that while in most countries selection continues to operate on the basis of a limited range of achievement criteria, the subject base of these criteria has changed considerably over the past decades. The role which Latin and Greek played for centuries in the humanistic-oriented European educational systems is now being gradually assigned to mathematics and modern languages. Students, parents and teachers are well aware that choice of, and good performance in, these subjects at lower secondary school strongly increase the chances of being admitted into selective upper secondary streams. Similarly, scientific streams in upper secondary education with heavy emphasis on mathematics now tend to be ranked highest in the prestige hierarchy - and, as for classics in the past - their students are granted access to practically all sectors of higher education.

Why have these subjects acquired this special status within many educational systems? A functionalist interpretation would be that they respond to the needs of modern industrialised societies in which science, communication and international contacts of all kinds are

domains of primary importance. While no doubt true, this argument leaves unexplained, for example, the absence of a similar role for technological subjects. Others would argue that mathematics and language studies have been assigned a screening role precisely because the type of abilities required for successful performance are mostly encountered among middle class students, thus illustrating the capacity of the system to maintain the existing power structure in society.

Complementary to both these interpretations is a third one which takes into account the influence of the control structure and the internal dynamics of educational systems. The new role assigned to mathematics and modern languages can be interpreted not only as the response of educational systems to certain societal requirements, but also as a response to their own internal needs, in particular, those aiming to maintain the traditional academic value structure. Indeed, with massive growth of secondary education and the gradual elimination of Latin and Greek from the curricula of secondary education, the new subjects seem to be especially well suited for identifying those students considered to be qualified to pursue further university studies. Mathematics and modern languages become to a large extent the functional substitutes of Greek and Latin in the selection process.

This argument tends to reinforce the viewpoint that many of the present problems in secondary education arise precisely because quite often the requirements of the top echelons of the educational system diverge from, or are in conflict with, other external needs. The argument of the present paper is that very often when this happens the internal pressures tend to prevail. An evaluation of the reforms of mathematics in secondary education could be of interest in this context. Some of the reservations with regard to modern mathematics courses may be due to the fact that they are better suited to those students who will pursue advanced studies than to the needs of the majority of students leaving the educational system before they reach higher education. This is a highly controversial issue which deserves thorough examination. There is, for example, a somewhat contradictory claim, namely that many of the problems stem from the inadequate training of mathematics teachers, which especially affects the earlier stages of education, since at the upper levels the teaching of mathematics has scarcely changed. A recent development in the United States also illustrates the dependence of the lower levels on the qualification requirements of the top echelons of the system. When evidence was put forward that results obtained in verbal standardised tests had a stronger correlation with performance in higher education than mathematics scores, the immediate consequence was to emphasize verbal aspects in the secondary school curricula.

Closely related to the problems posed by the choice of criteria are those pertaining to the selection of methods and techniques for assessing qualifications required for entrance into restricted upper secondary streams. Decisions in this field are influenced both by technical and political considerations. In the past, entry into academic streams of secondary education was mainly determined by examinations designed specifically with a view to selection. With the gradual elimination of these examinations and the introduction of continuous forms of assessment at lower secondary level, a new set of problems has emerged which illustrates the conflicting functions of assessment procedures.

While in fact continuous and more global forms of assessment tend to be widely supported on pedagogical grounds, they are often considered too subjective and informal as tools of selection. When entry into certain streams or institutions has a decisive influence on the educational and life chances of students - as may often be the case at this stage - there seems to be far greater acceptance of, and confidence in, the results provided by formalised and more technically sophisticated assessment procedures than in those which derive mainly from individual teachers' judgments. Greater awareness of the bias and possible injustices created by variations in teachers' marking standards and quality differences between schools have led to an upsurge of standardised tests adjusted to national norms.

In recent years, however, the use of these objective (achievement-oriented) and more sophisticated assessment methods for selection purposes has been criticised on two very different - and sometimes contradictory - grounds. From a purely meritocratic point of view, the main criticisms are of a technical nature. The large number of studies undertaken during the 1950s and 1960s have revealed not only the lack of validity and reliability of many assessment techniques currently used, but have also pointed out their inadequacy for prediction purposes : results obtained through selective admission procedures too often bear little relation to those obtained once students gain entry into the respective streams or institutions. Since according to this point of view,the selection process should be concerned with the identification of talent, the predictive validity of assessment procedures is considered an essential condition for its legitimisation. How it can be increased however, is a far more controversial matter. While in some cases the trend is to continue to adhere to narrowly-defined academic criteria and refine current assessment tools, there is a growing claim for focusing attention on certain cognitive aspects and attitudes essential for academic success which at present do not seem to be assessed (1).

1) Some of these problems are discussed at greater length in the section on post-secondary education.

From an egalitarian perspective one of the major criticisms of formalised meritocratic types of assessment is that under the guise of objectivity they tend to legitimise, if not reinforce, social inequalities. It is further being argued that there should be less concern to improve the predictive dimension of selection procedures and that more efforts should be deployed to make each cycle or stream more responsive to the diverse student intake, granting recognition to a far wider range of talents. In the search for alternative solutions, however, critics of the meritocratic procedures have been increasingly aware of the difficulties involved in attenuating the social bias of the credentialling process. Whether more or less cognitive oriented, whether more or less formalised, whether on the basis of final examinations or continuous forms of assessment, all selection procedures based on indicators of talent or performance within the educational system inevitably tend to favour the more privileged social groups.

What, therefore, are the alternatives proposed in countries where it is considered of prime importance to reduce the socially selective role of the educational process? In Norway and Sweden, for example, while the stated long-term objective is to abolish selection throughout secondary education, it is nevertheless expected that restricted entry will be applied in the near future on an ad hoc basis, i.e. whenever student demand for certain branches exceeds available capacity (the number and type of restricted branches may vary from year to year). In these cases the strategy being gradually adopted is to develop alternative admission procedures so as to increase the chances of specific target groups which in the past, for lack of either formal qualifications or incentives, have been underrepresented in certain streams or in post-compulsory education in general.

The large majority of students coming directly from lower secondary education continue to be selected on the basis of past educational performance. Interestingly enough, even where meritocratic principles are under strong attack, the trend is to continue using more formalised and objective assessment procedures to determine the entry qualifications of these groups. What is basically a new trend is the development of parallel or complementary admission schemes using quota systems, lotteries, formal recognition of working experience, etc. Although these schemes respond to different principles and serve different purposes they share a common characteristic in that they attach far less importance - in some cases none - to formal educational qualifications, adopting other criteria, such as social origin, sex, motivation, working experience or luck, in order to increase the chances of those groups which in the competition for entry under traditional educational standards have been permanent losers.

The multiplication of these experimental schemes reflects a radically new approach to the selection issue. For a long time, and still in the majority of OECD Member countries, selection, as traditionally conceived, was considered a key instrument for maintaining excellence and the elitist character of certain sectors of the educational system. By now it is being increasingly perceived by many groups as an instrument which in certain cases may facilitate the attainment of a more democratic recruitment. The implications of this new approach will emerge more clearly in the analysis of changing admission policies at post-secondary level.

ii) The transfer/terminal dilemma in upper secondary education

Overall trends in the reform of upper secondary education have been examined in detail in a recent OECD study (1). Briefly, they point to more comprehensive institutional frameworks, greater diversification with less hierarchical differentiation, closer integration between general and vocational studies, more flexible schemes to facilitate alternation between education and work. Whilst most Member countries are in agreement with these general organisational principles it is also true that consensus often tends to be reached on the basis of generalisations which fail to state clearly the objectives and functions of this level of education or the difficulties or unintended consequences likely to arise from the implementation of the new arrangements.

The uncertainty which prevails in many Member countries over the future of upper secondary education, pending the definition of coherent social and educational policies for the 16 - 19 year group, is reflected in the intermediary role to which it is gradually being confined between two more firmly established sectors, compulsory and higher, with a resulting lack of clarity as to its own goals and specific purposes. Its problems are perhaps best illustrated by a discussion of the pressures around the transfer/terminal dilemma which currently besets a number of upper secondary streams.

As the traditional university preparatory branches are being attended by an increasing number of students who do not, or are not able to go on - at least directly - to higher education, and as technical streams, formerly terminal, now lead on to further studies, a growing number of streams are being required to fulfil simultaneously both a transfer and a terminal function. While technical streams have rapidly responded to transfer requirements, far less progress has been made in adapting general streams which can prepare students for leaving the educational system and entering employment.

1) OECD : Beyond compulsory education, op. cit.

Three further, related questions arise in this context : why is it that in streams with this dual responsibility the transfer function tends to be so predominant? In what way is the terminal function of these streams affected? What consequences should be drawn if the aim is to develop educational schemes suited to the majority of the age group concerned?

The traditional hierarchical structure of secondary education and the basis on which this hierarchy has been historically established, suggest the answer to the first question. Since, particularly in European countries, the general education sector was developed in order to select and train students for universities, the ranking of each stream was primarily determined by the recognition which universities accorded to its qualifications. Thus, the wider the range of university options for which a particular stream qualified (its transfer potential) the higher its prestige. Also in the more recent comprehensive as well as in streamed systems, a key indicator of the status of schools or branches has been the proportion of school leavers proceeding to, or accepted by, higher education institutions, ratios which were taken to reflect the effectiveness of schools and branches in attracting the kind of talent suited for an academic type of education. The excellence of the output was of course very often due more to the way the initial selection was organised than to the training provided by the particular institution or line of study.

Until recently this long-standing tradition of equating transfer with talent and prestige was not seriously questioned, so that it was quite natural for secondary schools, and especially their teaching staff, to devote their efforts to preparing students for higher education in order to maintain or obtain a recognised standing in the hierarchy.

The problems of the technical (terminal) streams were somewhat different. While no doubt considered as the "less noble" sector by the academic world, precisely because they did not qualify for higher education, these streams had considerable scope for establishing their prestige in society by the market value of their credentials. Their status varied from country to country and within them according to specialisation. In Norway and Austria, for example, their prestige was such that, in view of the strong competition for entry, they often tended to be highly selective. In Norway, there is the remarkable phenomenon that around 25 % of leavers from general secondary education apply for entry to secondary vocational schools. A similar trend is emerging in Sweden.

The decisions taken in some Member countries to allow transition from technical schools to higher education - an important step in itself towards democratisation of the educational systems - do not seem to have given sufficient consideration to the difficulties arising from the transfer/terminal dilemma. Since the prestige of these streams within the educational system depended to a large extent on increasing their transfer potential, this meant growing emphasis on general education and the gradual acceptance of norms and standards corresponding to the academic milieu. While it is true that in such a process alternative routes to higher education were provided for students who otherwise would have been prevented from continuing their studies, in most countries, insufficient attention has been paid to the consequences for the large proportion who enrolled in these courses expecting to complete their education at this stage. In neglecting the aspects on which their former market value was based, these streams may be penalising students with practical abilities unable to meet more narrowly-defined academic standards. Moreover those succeeding and wishing to leave the formal system ran the risk of facing additional difficulties in employment. It is probable that the declining value of certificates awarded by terminal/transfer streams is not merely the result of educational inflation; employers' scepticism may have been reinforced by the strong transfer orientation of these streams as well as by their acceptance of the screening role of the educational system, which leads them to the belief that those students who do not proceed to the next level when they have the formal possibility of doing so are indeed the less talented.

Similarly, for many students from general and technical streams, the fear of not being adequately prepared to fulfil a useful role in the outside world, the conviction that only higher education credentials will ensure satisfying jobs and salaries and even the fear of being labelled as failures or less bright may be influencing considerably their decision to continue, even if unwillingly, in the formal education track.

Up to the early 1970s the effects of this academic bias were not seriously felt, largely because the aspirations towards transfer generated by the secondary level could be fulfilled by the concomitant expansion of higher education. This situation has recently undergone a quite drastic change in many countries. Growth rates in higher education have declined and are expected to remain low in the immediate future; in addition, the traditional pattern of uninterrupted studies for young people up to their early or mid-twenties is being seriously questioned.

Policies aimed both at expanding formal educational opportunities for the 16-19 year group while limiting the possibilities of direct transfer to post-secondary level for young school leavers, may easily lead to an explosive situation if the upper secondary level continues to be viewed predominantly as a preparatory or pre-selective stage for further studies. These risks may increase as most of the reforms envisaged anticipate a growing number of upper secondary branches having transfer and terminal functions, a sine qua non for achieving parity of esteem among the options.

Strategies to reduce the strong academic drift stemming from the higher levels of the system and break the educational lockstep will have to involve economic and social as well as purely educational measures. In this section, primarily concerned with the latter, it is argued that an essential step in this direction would be to ensure that upper secondary streams and programmes are able to establish their value and prestige as a terminal cycle as much as a preparatory stage for further studies. Educational and social objectives would have to be much more clearly defined, taking into account the variety of interests and needs of the growing proportion of the age group reaching this level. Minimum absolute standards would need to be set, and arrangements made for the majority of students to attain them through various types of learning situations, within much more flexible time schemes, and through more imaginative methods of assessment. Such arrangements would involve less competition and greater opportunities for the successful completion of this stage, although the way in which this may affect standards would need to be seriously considered.

The extent to which upper secondary education will be able to train students for further studies without neglecting or underrating equally important alternatives, and to restrict itself to certifying levels of attainment without simultaneously having a strong pre-selective role for the next stage, will depend not only on essential changes in external rewards but also on the pattern of development of higher education in individual Member countries. Particularly important in this context will be the admission methods and criteria to be adopted by this level in the future.

E. Post-secondary education

i) Diversity in patterns of development

The changing economic and social situation in the western world, the problems posed by the unemployment of graduates, the need to limit and use more efficiently available resources and pressures for

greater social justice, have led many OECD countries to review substantially their past policies for higher education.

A series of new questions have also been raised by the recent and largely unforeseen decline in the growth rates of enrolments in post-secondary education in a number of countries, after about two decades of rapid growth (see Table 1). The following points are of particular interest:

- the marked slowdown and even stagnation of growth has affected countries which had reached very different enrolment ratios by the late 1960s (United States, Sweden);
- the downward trend was registered primarily at university level and also, although to a lesser extent, in the non-university sector, so that it could not be interpreted as a mere shift in demand;
- in most countries the demographic factor played a limited role (an outstanding exception being Japan); the downward trend is mainly explained by a decrease in the growth rates of qualified leavers from general education and in transfer rates from secondary to higher education (1).

Whether the slowdown in growth rates is a temporary or more permanent feature of post-secondary systems remains an open question. This is due both to the uncertainties surrounding future economic and social policies and to the difficulties in assessing the impact of certain reforms envisaged on the size and shape of post-secondary systems in the next decades. It is therefore even more difficult to make generalisations about the future of post-secondary education in the OECD countries than about the previous levels of education.

The diversity of national policies for this level of education is explained by several factors :

a) In most countries, notably in Europe, universities represent the oldest and most prestigious sector of the formal education system. Their particular history and tradition are crucial in determining the nature of their own internal reforms and also in influencing the structure of the entire post-secondary system. Thus, universities with a Humboldt, Napoleonic, Oxbridge or Land Grant tradition have their own specific problems, and must resort to different methods, strategies and time spans in their attempt to respond to common pressures and objectives;

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1) Institute of Education, European Cultural Foundation: Recent Student Flows in Higher Education, ICED, New York, 1976.

b) There is also a fundamental difference between countries where, at least in practice, voluntary attendance is considered to start at the post-secondary level (United States, Canada, Japan) and those where the break between the compulsory and post-compulsory stage still takes place effectively at the secondary level (at upper secondary in most northern and central western European countries, Australia and New Zealand, and at lower secondary in the majority of the Mediterranean countries).

While in North America present policy is to guarantee open access to the 13th and 14th year of education (post-secondary level) either through the extension of initial education for the majority of the relevant age groups or by continuing or recurrent education schemes for adults, in Europe priority is now being given to opening, expanding and diversifying educational opportunities at the upper secondary level.

It is an open question whether European countries will aim at post-secondary education ratios similar to the United States once they reach mass upper secondary education. If they go in this direction will it be done through the development of a community college type of institution or throug other types of institutional frameworks? Or again, will they keep a relatively restricted and more professionally oriented post-secondary system, assuming that some of the basic functions which are at present being fulfilled at post-secondary level in North America - both in the fields of general and vocational education - in Europe will remain the responsibility of the upper secondary school?

The latter alternative has so far failed to get the attention it deserves because of the complex and delicate problems involved in qualitative comparisons. Notwithstanding the need and interest of serious analysis of these qualitative aspects, a significant and more "neutral" indicator could be used, namely the modal age at which students enter post-secondary education.

The analysis of enrolments by single year of age in different countries (Table 2) shows that while in the United States and Japan the majority of the 18-year-olds in formal full-time education are enrolled at the tertiary level, in many European countries the same age group tends to be heavily represented at the secondary level (1). This trend is most pronounced in Austria, Germany, Netherlands, Norway and Sweden where a similar phenomenon - though far less evident - can also be observed for the 19-year-old students.

1) In the United States in 1970, 6.7 per cent of 17-year-old students in formal full-time education attended the post-secondary level.

Table 1

GROWTH RATES OF TOTAL ENROLMENTS IN HIGHER EDUCATION
IN A NUMBER OF OECD COUNTRIES

	1960/65 (1)	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
AUSTRIA										
University	-	9.6	4.5	6.4	8.1	6.5	5.6	4.3	3.4	7.4
Non-University	-	-	-	-	17.6	17.6	16.4	14.4	14.2	-
TOTAL	-	-	-	-	10.9	10.0	9.3	7.9	7.5	-
BELGIUM										
University	-	10.2	10.0	9.5	7.5	7.9	7.9	3.9	2.1	1.9
Non-University	-	7.3	8.0	16.3	4.7	-	-	-	12.7	-
TOTAL	10.5	9.0	9.2	12.3	6.3	-	-	-	6.4	-
CANADA										
University	14.0	13.8	13.1	10.4	14.6	12.8	2.2	1.2	5.5 •	5.0
Non-University	8.9	15.1	17.7	11.2	4.7	11.2	7.2	2.4	4.0 •	4.6 •
TOTAL	13.2	14.1	14.0	10.5	12.6	12.5	3.1	1.4	5.2 •	4.9 •
DENMARK										
University	13.0	11.4	12.5	5.5	7.4	8.7	9.1	8.9	5.0	4.9
Non-University	5.4	5.5	3.8	18.0	2.0	0.8	5.0	16.6	2.7 •	5.9
TOTAL	10.4	8.8	8.8	10.6	5.0	5.4	7.5	11.9	4.1	5.3
FRANCE										
University	13.8	10.0	13.5	15.6	3.6	3.8	6.5	5.1	0.8	2.1 •
Non-University	10.6	1.0	8.6	10.3	10.4	3.8	8.9	8.2	6.0	1.6 •
TOTAL	15.5	8.4	12.7	14.7	5.5	3.8	6.9	5.6	1.7	2.0 •
GERMANY										
University	4.2	7.0	3.2	6.6	6.5	9.1	13.7	15.1	10.6	5.5
Non-University	5.4	1.4	1.7	3.8	7.2	3.3	31.1	-5.2	11.8	16.2
TOTAL	3.3	5.8	2.9	6.0	6.8	7.9	17.1	10.6	10.8	7.6
ITALY										
University	8.7	12.1	9.7	10.4	12.0	10.8	11.3	5.8 •	4.5	-
Non-University	3.9	18.2	0.7	2.4	-0.1	3.5	3.8	2.1 •	8.9	-
TOTAL	8.4	12.3	9.4	10.1	11.7	10.7	11.2	5.7 •	4.6	-

JAPAN										
University	8.3	11.7	10.8	9.4	6.7	3.9	4.4	4.1	4.4	-
Non-University	12.3	32.1	20.4	8.7	3.2	-0.05	4.6	4.6	7.6	-
TOTAL	8.9	14.2	12.6	9.3	6.1	3.2	4.4	4.2	4.9	-
NETHERLANDS										
University	9.6	10.6	9.3	8.8	10.4	10.4	9.2	-	-	-
Non-University	5.1	5.0	9.7	8.5	7.0	6.9	5.7	3.3	4.2	4.3
TOTAL	6.9	7.4	9.5	8.6	8.5	8.5	7.3	-	-	-
NORWAY										
University	15.4	8.1	11.5	8.1	14.1	9.8	9.3	7.3	5.4	-
Non-University	-	9.0	7.2	5.3	1.4	4.5	12.5	12.6	8.8	-
TOTAL	-	8.5	9.4	6.7	8.0	7.4	10.7	9.6	6.9	-
SWEDEN										
University	14.7	16.9	22.1	18.4	-0.5*	8.5	- 1.3*	-5.0*	-	-
Non-University	9.5	-	7.8	10.0	21.4	11.2	-19.4	-1.3	-	-
TOTAL	11.7	-	19.2	15.0	3.0	8.9	- 4.7*	-4.4*	-	-
UNITED KINGDOM										
University	7.6	14.1	9.8	8.0	5.9	4.3	4.2	2.9	2.6	-
Non-University	9.4	8.3	10.7	4.9	-0.3	2.2	0.9	0.1	0.4	-
TOTAL	8.5	11.1	10.3	6.4	2.8	3.3	2.6	1.5	1.6	-
UNITED STATES										
University	8.4	6.4*	6.8*	5.9*	5.6	5.6	1.6	1.3	1.9	-
Non-University	13.3	12.3*	14.4*	19.3*	18.5	6.6	5.8	3.8	7.2	-
TOTAL	9.0	7.4*	8.1*	8.1*	8.0	5.8	2.5	1.8	3.0	4.5*
YUGOSLAVIA										
University	1.3	3.3	6.8	15.0	9.7	11.3	7.7	8.3	11.6	7.2
Non-University	16.7	9.7	9.6	1.7	-7.2	4.0	9.2	3.4	2.6	15.1
TOTAL	6.5	5.7	7.8	9.8	3.6	8.9	8.2	6.8	8.9	9.5

Note : 1) Average annual growth rates.
* Estimation.

Sources : OECD : Development of Higher Education, Analytical Report, Paris, 1371.

Institute of Education, European Cultural Foundation : Recent Student flows in Higher Education, ICED, New York, 1976.

Table 2

DISTRIBUTION OF 18-AND 19-YEAR-OLD STUDENTS ENROLLED IN FULL-TIME EDUCATION

		18-YEAR-OLD				19-YEAR-OLD			
		Compulsory	Post-Compulsory		Total	Compulsory	Post-Compulsory		Total
			Secondary	Post-Secondary			Secondary	Post-Secondary	
1. Australia	(1972)	-	7.9	10.0	18.0*	-	1.2	9.3	-
2. Austria	(1969)	-	13.7	2.4	16.1	-	6.6	4.8	11.4
3. Belgium	(1966)	-	24.5	8.8	33.2	-	11.2	13.2	24.4
4. Canada	(1970)	0.2	32.3	13.0	45.5	-	9.5	20.8	30.3
5. France	(1970)	1.9	21.1	7.6	30.6	0.5	9.1	12.2	21.8
6. Germany	(1969)	-	11.8	1.0	12.9	-	5.7	3.9	9.6
7. Greece	(1969)	-	43.9	4.6	48.5	-	5.0	7.7	12.7
8. Ireland	(1970)	0.2	11.7	8.7	20.6	-	1.9	10.0	12.0
9. Japan	(1970)**	-	5.0	24.4	29.5*	-	-	22.0	22.0
10. Netherlands	(1971)	0.9	21.0	7.8	30.1*	0.1	10.4	11.2	21.8
11. Norway	(1970)	-	38.8	1.4	40.6*	-	22.4	6.4	28.9
12. Portugal	(1970)	0.8	17.6	1.7	20.2	1.0	14.4	3.2	18.6
13. Spain	(1970)	1.7	9.2	7.6	18.5	1.1	5.4	9.6	16.1
14. Sweden	(1972)	-	39.1	1.6	40.7	-	15.9	8.1	24.0
15. United Kingdom	(1970/71)	-	-	-	-	-	-	-	-
16. United States of America	(1970)	0.2	16.7	36.9	58.1	-	3.3	37.7	45.4*

* Including a very small proportion of students enrolled in special education.
** Estimation
Source : OECD Yearbook of Education Statistics, Vol. II, Paris, 1973.

Of course these differences should be interpreted very carefully. They do not necessarily mean that all European students have more years of formal education before entering higher education (this is only the case in Germany), in some cases they are due to late school entry age (Scandinavia), in others they are explained by the large number of students who repeat grades (France). They do point to the significant fact, however, that under present schooling conditions, if European countries aim at achieving United States levels of enrolment ratios for their 18-and even 19-year-old population, this would not lead to a similar expansion of their post-secondary systems ; consequently there would not be the same need for a multi-purpose or polyvalent type of short-cycle institution as has been the case in North America. By the same token, if these schooling conditions were to change i.e. earlier entry, shorter studies, no repeating, etc., they could have important consequences for the post-secondary level;

c) significant variations among Member countries in the development of their post-secondary systems are likely to be further encouraged in view of; (i) increased responsiveness of post-secondary education vis-a-vis the economic and social situation of each country which will also imply greater vulnerability to political and social pressures; and (ii) increase in public control likely to weaken the internal power structure of certain higher education institutions formerly under the aegis of professors (in many respects an homogeneous social group). In addition, the nature of individual demand is likely to vary more from country to country; for example recurrent education schemes will be considered a more realistic alternative in countries where they are adequately supported by social and economic measures. Similarly the way the demand from adults is channelled in various countries and the institutional arrangements which are developed in order to satisfy it will have significant consequences for the future development of post-secondary systems. Finally it should be stressed that what has been called "the frantic gallop for qualifications and credentials" has few chances of being stopped in countries which maintain a rigid link between occupation, level of education or credentials, and income.

The potential for diversity in the future development of post-secondary systems as outlined above provides the background against which their common problems related to the selection and credentialling process can now be considered. These can best be dealt with in

the context of admission policies, organisational patterns and certification procedures.

ii) Admission policies

In recent years access to post-secondary education has been a key issue in political and academic debates. In continental Europe, with a century-old tradition of "open access" to universities, views and approaches to many aspects of this problem are very different from countries such as the United States, Canada, Japan or the United Kingdom, where selective university entrance has existed for a long time, often criticised and even modified, but never seriously questioned.

As recently as the late 1960s ideas and proposals for introducing selection in European universities met considerable resistance from groups with very different educational and social ideologies. In the first place, restricted access was viewed as being in open contradiction to the basic civil rights of individuals since most certificates awarded by the academic secondary streams (Abitur, Baccalauréat, Matura) marked the completion of studies, and also granted the legal right to enter universities. Secondly, the lack of valid and reliable assessment procedures enabling accurate prediction of future educational and professional performance, plus the well-known social bias introduced by these tests and exams, served to reinforce the scepticism of groups defending an elitist conception of the universities as well as of those advocating the further democratisation of university studies.

It should be noted that up to the late 1960s the issue of restricted entry into universities tended to be viewed, even by some of the most radical students and academics, in relative isolation from the selection process operating throughout the rest of the educational system; "open access" to universities was rarely associated with the fact that it concerned only a privileged minority which had succeeded in overcoming the selection hurdles of the earlier stages. Even those who rightly argued that formal selection schemes would mostly result in blocking the opportunities of the small but increasing number of low-income students qualifying for entry into universities, seemed to be far less critical of the hidden forms of selection which lead to the elimination of a considerable proportion of students during the first years of university studies. Finally it should be stressed that in most European countries selective entry exists primarily in the non-university sector. This applies not only to the small sectors of elite institutions such as the Grandes Ecoles in France, where competitive entry has long been institutionalised, but also to the

less prestigious post-secondary technical institutions. In the latter case, restriction of entry has never been seriously questioned; firstly because these institutions accepted candidates from non-academic secondary streams whose credentials qualified for, but did not grant automatic right of entry to the next level, and secondly because they were seen to be more closely geared to manpower requirements.

The 70s appear to mark a period of significant changes in admission policies in post-secondary education. While financial and employment constraints are playing a crucial role in accelerating the process of change, recent proposals and actual reforms are also backed by social and educational considerations reflecting a different approach to selection.

From an educational point of view, the gradual introduction of numerus clausus in European universities is seen as directly related to efforts to reduce selection during the earlier levels of education and postpone it to a later stage. This has been the case for quite some time in non-European OECD countries (United States, Japan and Canada) where selective universities have coexisted with mass, mainly comprehensive secondary systems. While in Europe the introduction of restrictive entry into universities is partly the result of the development of mass secondary education, it could also be argued that certain forms of selection at post-secondary level may play an important role in accelerating the reform of secondary schools and their democratisation. It is, for example, far more feasible to adopt policy measures designed to expand and diversify the upper secondary level and allow more streams to qualify for entry into the next stage if it is clearly understood that these qualifications do not automatically entitle or guarantee leavers direct entrance to post-secondary education. Steps in this direction are being taken in a number of countries; the proposed reform of the French Baccalauréat, intended to disassociate completion of secondary education from university entrance qualification, is an eloquent example of the force behind this movement.

From a social point of view, strong arguments are now advanced in favour of more explicit and organised forms of selection at post-secondary level, particularly within sectors perceived as costly subsidies to the more privileged groups of the population. It could in fact be argued that the policies of response to spontaneous individual demand which prevailed during the past two decades have mostly benefited young school leavers of middle class origin who already had been greatly favoured by the expansion of opportunities at secondary level. It is considerations of this kind that are leading to what may be termed more discriminatory admission policies at post-secondary level.

A clearly-stated objective in various Member countries is that restrictions in the intake capacity of post-secondary systems should not affect all candidates in the same way. At least two target groups are clearly differentiated, each being subject to a different policy: (i) more stringent selection procedures among secondary school leavers, particularly among those coming directly from academic-oriented streams ; (ii) greater accessibility for adults and/or people without the traditional formal qualifications.

As secondary school leavers still represent an overwhelming majority of the demand for post secondary education, far more progress seems to have been made in limiting entry for the first group than in enlarging opportunities for the second. With the exception of countries like the United States, Canada, Norway, Australia, the United Kingdom or Sweden, the proportion of adults entering through special admission schemes at the overall post-secondary level is marginal; it is practically nil in highly selective institutions and branches of study in most OECD countries.

Since the trend is to channel these groups through different admission procedures, the problems and issues posed are considered separately.

a) Admission schemes for qualified secondary school leavers

1. Implications of increased selection

The first policy question is whether restricted entry for school leavers is intended to be applied throughout the total post-secondary system or whether it will be limited to certain institutions and/or streams. The problems of the co-existence of closed and open sectors are familiar to OECD countries. In the United States, for example, it has been used as an explicit strategy to facilitate very rapid expansion of post-secondary education. While it provided educational opportunities to large numbers of secondary school leavers on the assumption that "more education is better than nothing"and favoured diversification, it did not alter significantly the social distribution of these opportunities. More formal schooling was provided to all social groups but young people of middle class origin were able to maintain their relative advantages by seeking admission into the selective and more prestigious long-cycle institutions. There is thus a major risk in such a strategy that post-secondary systems as a whole may succeed in having a more democratic recruitment without thereby reducing social inequalities.

It has also been argued recently (1) that restrictive entry policies within certain types of professional training and open access in others may result in a very unequal distribution of talent among the professions with negative consequences for society as a whole.

In a growing number of European countries, i.e. Germany, Sweden and the Netherlands, the trend is towards closer control of student intake throughout the post-secondary system. Given present schooling conditions such a policy is more viable in Europe than in the United States. In European countries most 18-year-old students and a large number of 19-year-olds attend the upper secondary level which continues to be assigned a selective role. Such strategy, however, is fraught with a risk of increased unsatisfied demand, should the supply of places at post-secondary level grow at a much slower rate than the number of qualified school leavers. European countries tend, therefore, to provide incentives to young people to break the traditional pattern of prolonging full-time initial education, mainly by developing educational and occupational opportunities outside the formal post-secondary system, and by opening up possibilities for re-entry after a few years of interruption of studies(2). In North America this role is mainly being assigned to community colleges, proprietary schools and a large variety of non-traditional schemes. Contrary to the general trend in Europe, in North America the latter are also designed for the 18-year-olds coming directly from secondary schools.

The search for, and creation of, such opportunities for young people has been slow and particularly difficult in recent years due to economic recession and unemployment. Furthermore, it is quite evident that the success of recurrent education schemes in liberal societies will greatly depend upon whether the more privileged students in terms of talent and social origin accept the idea of interrupting their studies. This is more likely to happen in countries where, for a variety of economic and social reasons, higher education has become a less attractive alternative than in the past.

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1) K. Eide : "Certification : Cause or symptom", op. cit.

K. Härnkvist : "Individual Differences in Higher Education: Selection or Adaptation" in Proceedings of the Inaugural Congress of the European Association for Research and Development in Higher Education, Swets & Zeitlinger, Amsterdam, 1974, p. 282.

2) OECD (CERI) : Recurrent Education : A strategy for lifelong learning, Paris, 1973.

OECD (CERI) : Recurrent Education : Trends and Issues, Paris, 1975.

It is, however, highly questionable whether the policy of maintaining a rather narrow range of full-time higher education options, attractive because of their relative scarcity, will favour this trend and allow for less socially selective systems. The choice of selection procedures is crucial in this context, but before dealing with this matter it is important to stress that the introduction of formal selection at post-secondary level, independently of the procedures used, may lead to changes in the composition of the student body merely by its effects on individual demand. Institutions or branches of study may become more attractive for certain social groups precisely because they restrict entry, while the same measure may help to dissuade other groups from even applying. This is a complex matter which will be explored in greater detail in a future OECD study on a admission policies to post-secondary education.

2. Selection methods and criteria

The global trend to narrow entry in most sectors at post-secondary level and in many cases to dissuade secondary school leavers from academic streams from proceeding directly to the next level, has highlighted the question of adequate methods and equitable criteria of selection among this pool of candidates. Choices depend, of course, on the objectives being pursued. The problem is that such objectives are often not made explicit and, more frequently, that a balance needs to be found between various conflicting objectives. In addition, even when policy decisions are made with respect to priorities, the practical problems involved in the organisation and implementation of admission procedures are extremely difficult to solve.

While in most countries the trend at post-secondary level has been to favour a type of selection among qualified school leavers likely to ensure high educational and professional standards, results so far are not considered satisfactory.

First of all, although many of the conventional assessment techniques measuring past cognitive achievement or scholastic aptitude are shown to have certain predictive value (a logical consequence of the hierarchical dependence between levels), correlations between school marks or standardised tests results and future performance in higher education (as measured by marks obtained at this level, time to complete courses, etc.) are not sufficiently high - especially for those with average performance - to justify their exclusive use, even on efficiency grounds (1).

1) David E. Lavin : The Prediction of Academic Performance. A theoretical analysis and review of research, Science Editions, John Wiley and Sons inc., New York.
S. Marklund : "Summary, The Predictive Value of School Marks and tests in Selection to Higher Education" in S. Marklund, S. Hewysson & R. Paulin, Studieprognos och studieframgång, SOU, 1968.

Secondly, in view of the stronger competition likely to ensue from more stringent access requirements at the post-secondary level, there are a growing number of arguments in favour of complementing - very seldom replacing - traditional achievement-based selection procedures with instruments making it possible to tap a wider range of talents and likely to lead to greater social equity. Experiments with quotas, lotteries, assessment of work and other social experience point in this direction.

In spite of all criticisms of the use of school records and/or standardised tests as a base for selection, in practically all Member countries these continue to be decisive in determining the chances of qualified students to proceed directly to higher education, and even more so to be admitted to the institutions or streams of their choice. Thus, the more important questions with regard to this group relate to the type of information school records should contain, the assessment methods and criteria on which they should be based, and the weight they should be given in relation to less achievement-based selection methods and criteria.

Answers to the first question reflect attempts to reconcile the need to provide more relevant information to potential users of secondary school certificates, to ensure a maximum of objectivity and transparency of the underlying selection process, and to protect the individual's privacy. Comprehensive profiles, including assessment of personality traits, seem to be favoured for internal pedagogical purposes; their use, however, as a basis for future selection both by educational institutions and employers, is far more controversial. They imply subjective information with regard to attitudes and motivations difficult in itself to define and to measure and about which even the strongest advocates of this type of assessment have serious hesitation when it comes to transmitting it in written form for use as criteria for various admission schemes. It should be noted, however, that in Anglo-Saxon countries many selective institutions have for a long time resorted to interviews and letters of reference to complement the regular information provided by school records(1).

1) The practice by top-ranking institutions of investing time and resources in these procedures indicates the importance they attach to certain individual characteristics not necessarily related to school marks. In fact, many of these institutions have a long tradition of identifying different forms of talent and special personality traits, such as students who excel in sports, arts and other extra-curricula activities, or who are involved in certain types of work or life experiences considered to be pertinent to their future studies and to the life of the college. The use of a variety of not always clearly defined criteria has also facilitated certain discriminatory practices, e.g. favouring the entry of sons of alumni and other candidates considered to be an asset to the institutions for economic or social reasons rather than for their specific talents and abilities.

But it is clear that the generalisation of such informal techniques is practically impossible in mass post-secondary systems, all the more so in countries which have scarcely had this tradition in the past. On the contrary, as more and more countries are organising admission to higher education in a strictly impersonal way through centralised computer systems, the trend is to use variables which are more easily definable and to select indicators which are amenable to quantification and to more sophisticated measurement techniques. It is not surprising therefore, that marks obtained in secondary schools, together with a description of streams and subjects taken, continue to be the basic information required in school records designed for admission into higher education institutions.

A different question is whether marks or other indicators of performance should be included in school records transmitted to employers. The trend is to provide more descriptive information than in the past on the various courses followed, but to leave the responsibility of assessment to employers who, in this way, can establish and design recruitment methods and criteria adapted to their own specific needs. Underlying this policy is again the assumption that given the various functions of educational systems, it is not possible, and perhaps not even desirable, that standards applied at school should be the same as in the world of work. This does not imply any contradiction to the policy of making curricula and the structure of studies more responsive to employment needs, but does underline recognition of the fact that in view of the many functions of educational assessment, its results cannot be used for predictive purposes in employment.

Decisions on the assessment methods and criteria to be used in admission schemes at post-secondary level determine to a large extent the nature of the links and articulation between upper-secondary and post-secondary education. One of the main consequences of enlarging secondary school opportunities, with more stringent admission procedures at the tertiary level, is that school certificates are no longer a sufficient condition for entering a number of institutions or fields of study. As additional entry requirements tend to be set in terms of subjects taken and/or marks obtained at the preceding level, the risk is that secondary schools will be forced to pay undue attention to the pre-selective or transfer role at the expense of their other functions. Here it should be stressed that free access to universities undoubtedly has the advantage of enabling certain students to prove themselves during the first years of studies, a strong argument being used by those in favour of self-selection after entry. But in the absence of this last chance and without a serious possibility of recurrent education, the competition to enroll in upper secondary

streams with high "transfer potential" and the concern for marks or other indicators of performance at this level are likely to be stronger than in the past, since they become even more decisive for the student's future educational and life chances. There are already clear signs of this backwash phenomenon in various countries, particularly in Germany, where restricted entry into universities is being enforced whilst demand for entrance has been rising steadily. The fierce competition for entry on the basis of minimal differences in secondary school marks, often a matter of decimal points, is exerting a serious strain on teaching and assessment at this level and is being criticised by all parties involved, since these minimal differences can scarcely be considered to have any predictive value.

Finally, it should be noted that the importance attached to secondary school options and marks by selective higher education institutions may encourage the phenomenon of "artificial demand". Students with good marks or having taken "noble" subjects tend to choose restricted sectors, not necessarily because they are interested in the studies or professions to which they lead, but because they perceive them - most often rightly so - as a guarantee of higher educational standards, better employment prospects and higher financial rewards. This tends to be the case in medical studies sought by a high proportion of young people talented in mathematics and other basic sciences (commonly used entry criteria) but not necessarily motivated, or particularly qualified for the practice of the profession.

Strategies to mitigate the injustices derived from the excessive importance of school marks as entrance criteria for higher education are beginning to be adopted in European countries, e.g. Sweden, Norway, Germany and the Netherlands. While candidates continue to be ranked according to secondary school marks, there is a trend to establish fewer and larger categories which are thus mainly used for an initial broad classification. Given that marginal differences may be due to luck or other uncontrolled variables, other criteria are being introduced for more precise differentiation. These vary from the use of lottery, which makes more explicit the "luck" component in decisions of this type, to efforts to identify the degree of motivation of candidates, to awarding credit for work experience, relevant extra-curricula activities, etc. The trend towards considering non-academic criteria is gaining ground and some experiments are in progress whereby quotas of students with low qualifications, but meeting other criteria are granted entry into selective institutions. There are indications that performance of such students is equal and in some cases higher than that of candidates with the formal qualification requirements. The problem, however, beyond that of defining and

identifying indicators of motivation, is how to render acceptable decisions which may result in admitting students who are less formally qualified than those being rejected. The best-known example of the conflict arising from the use of quotas - according to race in this instance - is the De Funis vs. Washington University case in the United States which revealed the lack of consensus, both at national level and in academic circles, as to the use of non-academic criteria for selection purposes. There have been other cases in the United States and also in Germany of rejected qualified candidates appealing to the courts.

In the United States school marks are at present also considered the more valid criteria for recruitment into colleges and universities. They are, however, used in combination with standardised aptitude and scholastic tests which allow for national comparability among candidates coming from a highly decentralised and diversified education school system. It is common to complement marks and test results with additional information obtained either through interviews, teachers' recommendations or school records. In these cases, extra-curricula activities, personality traits and family and social situation of students may carry considerable weight with admission officers.

More recently, observers of the American system have also been questioning some of the assumptions underlying the use of achievement or other predictive indicators for admission into selective institutions.

One argument against exclusive reliance on marks and test results is that although they have a predictive value for performance at the next educational level, they bear little relationship to performance beyond schooling (1). A related and even more forceful claim is that if marks and grades were to measure characteristics which in principle are considered to be central to the educational process, e.g. analytical and critical mind, problem-solving capacity, tolerance of ambiguity, etc., they would be far more useful and relevant for certification and occupational placement purposes (2). Recognition of the "lack of relevance" of certain academic programmes and the so-called "mismatch" between education and employment highlighted the need to identify and define, conceptually and operationally, different types of academic and professional competencies. It is precisely in the United States that research has been going on to identify the main competencies required for the exercise of a number of professions.

1) Donald P. Hoyt : The Relationship between College Grades and Adult Achievement : A Review of the Literature, ACT Research Report N° 7, American College Testing Service, Iowa City, 1965.

2) The Second Newman Report : National Policy and Higher Education, Report of a Special Task Force to the Secretary of Health, Education and Welfare, M.I.T. Press, 1973.

The intention is not only to reform admission procedures or to introduce competency-based curricula in regular programmes but to show that these competencies can be acquired outside formal education. As will be seen later, one of the aims of advocates of this line of thought is to break the monopoly of formal post-secondary education over training and the award of professional credentials.

Another type of argument based on the value-added approach has been recently presented as follows: "If one accepts the idea that colleges exist to educate, then selective admissions based on test scores and prior grades make little sense. If an institution exists to educate students, then its mission is to produce certain desirable changes in students, or more simply, to make a difference in the student's life. The 'value added' approach to the goals of higher education suggests that admission procedures should be designed to select students who are likely to be influenced by the educational process, regardless of their level of performance at entrance. Instead,admission officers in selective institutions function more like race track handicappers: they merely try to pick winners. Handicappers, it should be stressed, are interested only in predicting the horse's performance, not in helping it to run better and faster." (1)

Since continental European countries have only recently begun to deal with the complex problems of selective university entrance and the establishment of centralised admission systems, they are only just beginning to share with the United States the need for national norm-referenced assessment procedures. But since standardised tests tend to be viewed with scepticism, efforts are mainly focused on maximum comparability between indicators of secondary school performance (2). While it is true that this was always more feasible in European systems than in the United States, it may become increasingly less so as nationally administered secondary school final examinations cease to guarantee direct access to universities or cease to exist altogether.

Already in Sweden where they have been abolished, and in Germany where they are organised at a state (Land) level, a central issue is how to take into account regional, institutional, or individual teacher variations in assessment. It is possible that once selective educational institutions accord less importance to previous formal qualifications, and more to other criteria like work experience, some of these complex technical problems may become less relevant.

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1) A. Astin : "The Myth of Equal Access" in the American Chronicle of Higher Education, September 29, 1975.

2) It is interesting to note that in Sweden and in Germany tests are being rapidly developed, but it is claimed that they will be used mainly to complement school records, or in certain cases to assess candidates lacking formal qualifications.

But in can also be assumed that change will be slow in view of entrenched values and attitudes, as well as lack of attractive alternatives outside formal education for the age group concerned, particularly at a time of high rates of youth unemployment.

In any case, it should be borne in mind that the choice of admission schemes for young people pursuing their initial education is basically a political decision: by determining the nature of the link to be established between the upper secondary and post-secondary levels, it has crucial implications for the future of both.

b) Admission schemes for adults

Evidence in most Member countries points to the fact that the slow but continuous increase in the number of adults entering formal education may well have a crucial bearing on change at post-secondary level. While there is certainly no consensus about the need for, or the desirability, of certain changes likely to ensue from greater adult participation, it is clear that either the existing institutions of higher education are effective in meeting the challenge of responding to these new groups, or else resources are likely be diverted to alternative institutions and sectors capable of satisfying this demand and willing to do so. The more recent interest in adjusting post-secondary education to certain recurrent education policy objectives and the concern to facilitate access conditions for adults, mostly justified on grounds of social policy, can also be interpreted in the light of the advantages which increased adult participation may have for higher education institutions themselves.

It is significant that the idea of recurrent education was launched in Norway and Sweden at a time (the late sixties) when, because of the extraordinary expansion of post-compulsory education, restrictive entry into certain university branches was considered inevitable. Limitation of intake capacity and selection among qualified school leavers could be made a more acceptable and legitimate proposal if candidates were assured that after a period of work, or having reached a certain age, they would have the right to enrol in post-secondary education.

However, what in practice really seems to have given impetus to the move towards increased adult participation was the turn of the tide during the early 1970s. Higher education institutions in a number of countries were then confronted with the radically new problem of how to maintain their resources, even ensure their

survival, in view of the empty places left by the slackening of youth demand. This has been particularly the case in the United States where higher education institutions rely heavily on student fees and are much more sensitive to "market" fluctuations. For many of them the alternative to partial or total closedown has been - and still is - the active search for new types of potential demand. Similar trends are found in other countries with radically different socio-political structures. In centralised systems like Sweden and France where governments are exerting considerable pressures on universities to ensure greater relevance and responsiveness to societal needs, the development of continuing or permanent education is also being used as a strategy to maintain the financial and human resources of higher education institutions.

The trend to open traditional post-secondary institutions, including the more selective and prestigious ones, to candidates without formal qualifications, reflects also the intention to bring about closer integration between students with different backgrounds and blur marked distinctions between the "noble" and "less noble" sectors of higher education (1). In a way it represents a countertrend to the previous policy of developing separate non-traditional programmes and institutions which, because of their distinct organisation and clientele, have encountered great difficulties in achieving parity status and recognition within the academic community.

The crucial question is whether long-established post-secondary institutions will succeed in designing curricula and courses valued both for their educational standards and their social relevance. Otherwise, a policy of integration may well mean that the problems of prestige and hierarchical differentiation which previously existed at the level of the system will reappear at the institutional level. Little progress will be made if, instead of having adults participate as fully recognised members in separate less prestigious institutions, they are granted places as marginal or second-class participants in the more conventional or elitist sectors, i.e. are there to be high-risk students in traditional academic programmes or students in peripheral second-rate courses (2)?

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1) OECD : Towards New Structures of Post-Secondary Education, Paris, 1971.
OECD : Policies for Higher Education, Paris, 1974.

2) A more detailed review of the problems and dilemmas posed by opening post-secondary institutions to adults and establishing closer links between formal and informal types of education can be found in a series of OECD studies on Learning Opportunities for Adults. Further analyses will be undertaken under the activity on Admission Policies in Post-Secondary Education initiated in 1976.

In dealing with non-qualified candidates seeking admission into post-secondary education, most Member countries tend to distinguish on policy and technical grounds at least two broad target groups: (a) young students still in their initial education coming from secondary streams or with an educational background which does not ordinarily qualify them to proceed to the tertiary level (second route) ; (b) older people without secondary school qualifications who, after interrupting their studies for some years, want to return to formal education (second chance). One particular group, usually explicitly barred from special admission schemes, is that of young students who recently dropped out from general upper secondary streams or failed in their final qualifying examinations. In this case the policy is to encourage them either to "try again" in seeking the ordinary qualifications or to interrupt their formal education and return after a period of work experience.

In countries with streamed secondary education, until very recently the few people granted special entry conditions were primarily young students coming from terminal technical branches. They were required either to take examinations equivalent to general school leaving examinations or to meet specific conditions set by the post-secondary institutions to which they usually applied.

The general trend of reform points to the probability of the concept of second route being extended to include strictly vocational branches (type b in the OECD classification) and even to a variety of non-traditional training schemes for the 16- 19-year-old, provided both within and outside the formal system. With this trend, such programmes are likely to maintain their professional terminal orientation, but candidates who wish to proceed directly to the next level will be given the possibility of gaining the additional educational qualifications required by the different branches of study or institutions. The recent reform approved in Sweden (1) whereby leavers from vocational terminal oriented schools are formally allowed under a special quota to compete for entry into post-secondary institutions, can be considered as the formalisation of a new second route.

There are reasons to believe that with the introduction of numerus clausus in universities, certain institutions of higher education, especially those providing short-cycle courses, will be used more and more informally by students as a second entry to selective institutions. This is discussed in the next section.

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1) Swedish Ministry of Education and Cultural Affairs : The Reform of Higher Education, 1975.

In the long run, however, it could be assumed that even if individuals respond favourably to the idea of alternating between work and studies, young students will make little use of these second routes, the more so in view of the trend to reduce distinction between routes. Ideally they would prefer to interrupt their studies for a certain period and qualify for entry on the basis of their work experience and knowledge and skills acquired, rather than be assessed on the basis of more conventional educational standards. There is already considerable evidence that a number of Member countries are trying to guide individual demand in this direction, that is to facilitate the entry of mature candidates who have interrupted their studies for a certain period, while being more restrictive in respect to young students in initial education, whatever their educational background.

Whether these measures, generally justified by the aim of bridging the educational gap between generations, should be given priority at a time when young people face so many difficulties in finding openings in the world of work, is a matter of controversy. Firstly, adults who are likely to be motivated, or who actually demand entry to post-secondary education, already belong to the more privileged groups of the population. Secondly, although it is true that in terms of educational levels of attainment or credentials they are in a disadvantaged position, it is doubtful whether this gap has the serious social implications often put forward. Adults who entered active life after World War II may have missed their chance in education, but in many ways were compensated by the benefits they got from an exceptionally favourable employment situation, quite different from that at present confronting the new cohorts leaving the educational system. In the light of the prospects of much slower economic expansion it could be argued that lack of formal qualifications is far less problematic for those holding jobs and having considerable working experience, than for young people whose chances of entering the world of work in a highly competitive situation primarily depend on their formal educational background.

The trend towards facilitating adult participation does not seem so far to have played a role in preventing young school leavers from proceeding to the tertiary level (1). In the future, however, adults are likely to become a far more "competitive" group. At least this seems to be the intention of many educational policy makers who have an eye not only to the services which post-secondary institutions may render to adults, but also to the advantages which may accrue to the system as a whole in having a more mature and diverse student population.

The presence of adults may help to accelerate certain structural and curricula reforms generally resisted by members of the academic community when requested or imposed by government officials. In other words, internal grass root pressures stemming from new groups not satisfied with present arrangements are likely to be more effective in modifying traditional patterns of study than formal rules or regulations elaborated outside the institutions concerned.

Financial considerations may also explain the interest of educational decision makers in enrolling mature students. These are essentially considerations relating to the impact of such enrolments on the public budget for higher education. Since adults tend to choose courses of shorter duration, prefer part-time attendance and have more possibilities of being either self-financed or aided by the enterprises where they work, they may make possible a reduction of unit costs within formal systems. However, it should be stressed that while adult participation may lead to a reduction in costs within the educational system, their greater requirements in terms of financial support may involve far more resources from society as a whole.

It would be useful now to look at a few examples of policy measures, still at the experimental stage, aimed at extending adult participation at the tertiary level through new admission procedures not necessarily based on past school records.

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1) It is important to note that in most countries where a slowing-down of youth demand took place, it actually preceded the introduction of both restrictive entry and positive discrimination measures vis-a-vis adults. It is possible that in the few countries (Sweden, Canada, United States) where the number of adults increased substantially, this phenomenon may have had the intended consequence of encouraging school leavers to interrupt their initial education and to postpone entry for some years. In the majority, however, adult participation is still marginal both in quantitative terms, and by its concentration in the less competitive institutions and programmes.

The clearest example of the intent to reach older groups lacking formal qualifications is found in institutions or special schemes where a minimum age of entry has been set, generally varying from 21 to 25 years. These age limits ensure that candidates have been out of the school system for a relatively extended period. In the British Open University where age is the sole criterion for admission purposes, students are accepted for a trial period during which their capacity to meet the standards of the institution is tested. When places are limited, the criteria used is time of application: first applicants get first choice.

A relatively new and potentially more significant measure is that of awarding formal recognition to applicants' work experience. While special entry conditions for people with a minimum age or years of work experience have existed for some time their impact was negligible, mainly because candidates were required to take practically the same tests and examinations as secondary school leavers. A main characteristic of recent schemes is that they exempt adults from certain formal educational requirements on the assumption that work or life experience and motivation may be at least equally relevant to success in post-secondary studies.

Considerable variations exist in the few countries experimenting on these lines as regards the definition of work experience, the forms of assessing it and the relative weight it should be given. These will be discussed only briefly in the present report; detailed information will be available in 1977 when a review of the various schemes now being proposed or developed in some Member countries is completed.

The so-called "25/4 scheme" recently introduced in Sweden is perhaps the best-known example in western Europe of a national policy aimed at ensuring greater adult participation in higher education. The scheme stipulates special entry conditions for people who are at least 25 years old and have a minimum of 4 years'work experience. Work experience is conceived in very broad terms, including all types of paid jobs, as well as unpaid work, i.e. child rearing. Entry requirements are, however, more conventionally defined: candidates have to pass secondary school equivalent examinations in those subjects relevant to their chosen field of study.

In France the University of Vincennes defines work experience as two years of full-time employment and contribution to social security. Candidates fulfilling this requirement and who are least 21 years old in some cases and 25 years in others, are granted direct entry. It is interesting to note, however, that a number of departments at Vincennes can only award university degrees which, in the academic milieu - but not necessarily in employment - are considered of less value and prestige than the traditional national degree awarded by most universities.

Among OECD countries the United States and Canada are probably the most advanced, both in respect of the variety of schemes proposed and of the number of adults involved. In these countries there is less emphasis on years and actual type of work performed than on the overall learning experience that takes place outside the formal education system. In these countries the actual problems of assessing experimential learning (a term used in the United States) are of critical importance since the aim is not only to determine the relevance of past experience for admission purposes, but also to measure the extent to which this experience can be accredited as part of a degree programme.

The main difference between the new schemes now being developed and the variety of existing part-time, sandwich or co-operative programmes where work experience is also a relevant component of academic studies lies in the fact that, while in the latter cases practical work is sponsored by the educational institutions themselves, in the former account is taken of experience acquired prior to entry. As has been pointed out, there is a certain incongruity in the fact that some institutions denying recognition of an experience acquired before entry may grant credit for the very same experience if it is sponsored in the context of a planned degree programme (1).

Underlying many of the recent developments is the principle that what students learn is far more important than when, where and how they learn. One strategy geared in this direction is to define degree programmes or even profiles of professions in terms of competencies, rather than on the traditional credits based or classroom attendance. This has led both to curricula reforms within the formal system (competency-based programmes) and to the realisation that competencies can be assessed and recognised even if acquired outside a structured educational framework. The recent trend to set up schemes which resemble the long-established London External degree, insofar as they introduce a sharp separation between formal instruction and certification, is also intended to facilitate access to credentials. One of the more radical examples in this direction is the New York Regents External Degree, frequently referred to as an "examining university". Its main characteristic is that it offers no instruction but assesses knowledge and skills and grants academic recognition in the form of credits and degrees, without necessarily requiring attendance in accredited post-secondary institutions. One interesting feature is that people can be awarded credits for an increasing number of

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1) Simon V. Keochakian : "Practical or Experimental Learning in American Higher Education", ICED (unpublished document).

courses taken in military service, in business and industry which have been evaluated, or in some way accredited, by the New York Board of Regents (1).

In the United States, standardised tests such as the College Board Advanced Placement Examination, and the College Level Examination Programme (CLEP) are the most widely used procedures for assessing non-collegiate learning. However, as originally they were mainly used for determining equivalency to traditional, discipline-based degree programmes, the present emphasis is on the development of new methods and instruments which allow the accrediting of a far broader range of work and learning experiences considered to be educationally relevant by less traditional, post-secondary institutions and schemes of study. The recently created CAEL project - Co-operative Assessment of Experiential Learning - funded by the Carnegie Commission and administered by the Educational Testing Service has been set to explore new and improved evaluation procedures and to provide guidelines serving a larger network of institutions. During a first stage, four areas of work have been identified (2) : (a) assessment of the achievement of interpersonal skills; (b) the use of portfolios in the assessment of prior learning; (c) the assessment of the outcomes of work experience; and (d) the use of expert judgment in assessing learning outcomes.

Finally, it should be noted that no country defines work experience in very narrow terms and there seems to be no clear policy of establishing a correspondence between certain occupations and entry into different types of institutions or fields of study. One reason may be primarily a technical one, as it can hardly be expected that educational officials or academics will be able to perform the complex, almost impossible, task of classifying jobs in terms of their educational relevance for the variety of post-secondary studies. Technical problems of assessment may become more acute in the future if competitive entry has to be organised among a wide pool of candidates on the basis of their work experience.

Social policy implications seem, however, to be more important in maintaining a broad definition of work experience. It can be foreseen that the higher the status in the job hierarchy, the more likely it will be considered to be relevant as entry qualification to an academic institution. Thus, although no doubt occupation will indirectly influence the educational chances of individuals, the intention is to prevent it from becoming a formal screening device for educational institutions. Only where positive discrimination measures are envisaged is it likely that this will be done, but in such cases it would not imply any value judgment as to the

1) Don Nolan: "The New York Regents External Degres: An examining University in America", OECD 1975 (mimeo).

2) CAEL: News letter, Vol. 1, No. 1, 1974

educational relevance of the various types of work experience. Finally, restricting entry to candidates on the basis of relevant practical experience is not without its dangers of social bias. If, for example, entry into medicine faculties were to depend primarily on previous work in hospitals or similar activities, people from higher social strata would probably be far more able to find places through special connections and have the necessary time to wait for vacancies, so that recruitment would end up by being even more socially selective than the present system.

iii) Structures : Towards an "aggregative" model of higher education (1)

The long tradition of considering higher education and university education as synonymous largely explains the typical features of the model of higher education which has prevailed until recent years in most OECD countries.

Firstly, higher education was understood to be a period of 3 to 6 or 7 years (varying according to countries) of consecutive studies, consecutive not only in that they allowed no intermissions within this period but also in that they followed on directly from certain selective branches of secondary education (2). Secondly, it implied a central basis for study, either in the form of residential colleges (Anglo-Saxon countries) or in rather large urban institutions, usually, although not necessarily, with strict rules about student attendance at lectures or seminars. Thirdly, it was discipline based. This meant that staff and students' life centred on the organisational embodiment of the discipline, i.e. the professorial chair or the department. It also implied that students had to follow a strictly determined linear sequence of studies with few options available. Finally, the only possibility of leaving the system with success was to obtain the final degree, the single measure of achievement in this "holistic" model of higher education.

A first major break from this uniform pattern (particularly dominant in Europe) took place in the course of the last 2 or 3 decades with the development and integration of a variety of educational programmes of shorter duration and stronger vocational orientation within a more largely defined post-secondary system. These short cycle post-secondary courses and institutions enabled school leavers interested in pursuing formal studies, but unwilling, unable or undecided whether to engage in long theoretical education, to obtain an intermediary qualification, sometimes used as a first step towards a degree, more often as a final diploma with a view to employment.

1) The terms "holistic" and "aggregative" are taken from G. Squires: "Innovations in British Higher Education and their Implications for Adult Education", OECD (mimeo, 1974, English text only).
2) G. Squires, ibid.

The problems faced by these new institutions in their endeavours to establish their reputation and achieve recognition in a community largely adhering to the traditional model of higher education have been analysed in detail in past OECD work (1). At the time it was argued that one of the key policy issues facing short-cycle higher education institutions was that of establishing an adequate balance between their transfer and their terminal functions: "Short-cycle higher education institutions must respond to the increasing pressure of social demand for higher education and offer real equality of opportunity; i.e. provide the possibility of transfer to university for students capable of, and wishing to, continue their studies: they must at the same time continue to assume their main role as agents of diversification and innovation by providing vocationally and practically oriented studies. The first requirement tends to force short-cycle higher education institutions towards a certain isomorphism with universities (and dependence upon them) and hence to neglect some of their original functions: the second might weaken their 'respectability' and distort their role as 'equalisers of educational opportunity'" (2).

At least in the medium term, the future of short-cycle higher education institutions will continue to depend quite closely on developments in universities. The introduction of numerus clausus in universities, as has been noted above, carries the risk that short-cycle institutions will be receiving a growing number of rejected and disillusioned university applicants and/or that in view of the difficulties of direct transition from school to university, many students will use them as "second routes" to selective institutions.

This is already the case in Germany where a substantial increase has been registered in the proportion of students or graduates from higher technical institutions (Fachhochschulen) proceeding to universities since the latter introduced restrictive entry. Whatever its merits in terms of democratising university recruitment, the costs of this transfer appear to be fairly high; universities grant very few equivalences for the knowledge and skills acquired during 3 or 4 years of post-secondary studies, so although candidates have the privilege of open access they are placed practically at the same academic level as school leavers coming directly from gymnasia.

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1) Short-Cycle Higher Education : A Search for Identity, OECD, Paris, 1973 ; Towards New Structures of Post-Secondary Education, OECD, Paris, 1971 ; Policies for Higher Education OECD, Paris, 1975.

2) Short-Cycle Higher Education, Ibid., p. 27.

In these circumstances, it is likely that transfer to universities will become subject to quotas or that a certain period of work experience will be required so as to avoid the excessive use of these institutions as a "back door" entry into universities.On the other hand, measures aimed at hindering or stopping such transfer may lead to reinforcing the "less noble" image of short-cycle institutions and consolidating binary or strongly fragmented post-secondary systems.

In the long run, however, problems related to the prestige hierarchy and stratification of post-secondary institutions are likely to be less important than was assumed some years ago,and the sharp distinctions between university/non-university, short-cycle long-cycle, theoretical/practical, to become increasingly blurred. There are already pointers in this direction: universities are beginning to introduce short-cycle programmes and to award below-degree level diplomas; in many instances short-cycle or non-university institutions provide the first cycle of university studies; in others they have acquired full university status: the development of problem oriented and interdisciplinary courses, of part-time and non-traditional schemes of study, of credits for work experience etc., implies closer integration between theory and practice. The emergence of recurrent education as a viable policy objective for the long-term development of the system, may further tend to make these dichotomies increasingly meaningless.

The general trend towards a modular or aggregative structure of studies may also result in more diffused post-secondary systems. The strategy adopted by many Member countries of organising higher education in terms of "cycles" - often self-contained - represented the first step in the transition from the "holistic" to what may be labelled "aggregative" model. While in some cases the cycle is maintained as an indivisible unit, in others a further disaggregation is allowed.

In the ideal or typical aggregative model the basic academic unit is the "course" of the "module". Considerable variations may exist in terms of their size, structure and in the way they are interrelated. A degree may encompass from 6 to 36 units depending on how they are defined and these may be linked in a linear way (related or contextual) or they may exist in self-sufficient isolation. "A la carte" arrangements tend to replace fixed curricula so that within certain limits it is up to the individual students to organise their studies. This student-centred pattern makes possible their association with several organisational units (discipline, area or problem-based) within one institution or even with different learning centres. Also, since intermissions between units are possible,

students may time their studies according to their needs and possibilities. Since the model focuses on instruction and certification (sometimes only the latter) rather than on socialisation, it follows that (a) studies can be organised in a decentralised way i.e. through correspondence, television and radio, usually with a minimum face-to-face teaching; (b) curricula are designed in a more explicit and rational way, more amenable to planning and evaluation; and (c) institutions may provide an assessment or certifying service to candidates having acquired their knowledge and skills outside their realm. Finally, although units can be aggregated to constitute a degree or some other recognised qualification, each unit in itself has a value and is credited. They represent a capital which can be accumulated through the years and which, under certain conditions, is transferable from one institution to another.

This is not the place to engage in a detailed analysis of the advantages and drawbacks of the aggregative model; it should be noted, however, that there may be a high price to pay for the greater diversification, flexibility and permeability which it is designed to provide. Among the more frequently cited dangers are excessive fragmentation of knowledge and atomisation of curricula, risks of random choices on the part of students lacking the necessary information and guidance to deal with the complex network of options, their possible isolation in the absence of long-term relations with teaching staff and among the students themselves, and the well-known problem of alienation characteristic of large, complex, bureaucratic systems. Some of these problems can be tackled, at least partly, through specific measures, such as providing directives for the sequence of modules in accordance with disciplines or occupational profiles, ensuring effective tutoring and individual counselling, setting up courses and seminars which integrate or synthesise the knowledge acquired. Others, of a more deep-rooted sociological nature and intrinsic to a model of post-secondary education which seems to abandon its traditional "socialisation" role and to stress more instrumental or utilitarian functions (such as transmission of knowledge and skills and certification), are far more difficult to deal with. A more detailed analysis of the implications of the aggregative model for certification may help illustrate some of these general considerations.

iv) Certification in Post-secondary Education

a) Current trends

It is not surprising that some of the more significant changes

contained in the aggregative model are addressed to the issue of certification. This is consistent with the strong pressures which exist both within and outside the educational system to ensure that post-secondary institutions maintain their role as certifying agencies - or at least keep close control over the certification process - with its implication for a greater disposition to reform procedures in response to changes in the clientele, employment needs and overall social policies.

By introducing a system of smaller self-contained academic units which can be valued and credited both independently and as part of larger units, the aggregative model presents, in addition to the advantages for individuals mentioned above (time-free and space-free education, implementing the career ladder concept, alternating between education, work, leisure, etc.), the possibility of certain desirable changes in the education/employment relationship.

Firstly, the existence of an aggregative organisational pattern necessarily implies substantial modifications to the traditional degree structure having as its axis the university degree and its capstone - the PhD. While it is true that in recent years a number of intermediary diplomas have been created - e. g. associate degrees and below-degree level diplomas, as well as the Masters degree - the fact that they are labelled "intermediary" between two well-established qualifications already reflects some of the difficulties they encounter in achieving recognition and the tendency to regard them (sometimes probably justifiably) as surrogates for failure.

The further multiplication of certificates and credentials marking the completion of shorter programmes and courses at different stages of post-secondary education, is a necessary step towards a more diffuse and flexible education/employment relationship. For this to become effective it is essential that traditional qualifications be integrated into this complex mosaic of credentials, losing some of their social aura and dominant screening role whilst providing more meaningful information.

The changes in the social and economic value of traditional qualifications are primarily a function of the actual practices and regulations concerning their use, affected both by conjunctural and longer-term structural factors. Some of these issues are analysed in Part Two of this volume. Here reference need only be made to the fact that the sheer quantitative expansion in the supply of degrees and the consequent flow of graduates to a far wider, range of jobs has in itself led to a more diffuse education/employment link. On the other hand this trend is being counteracted in several ways, notably in the public sector where jobs continue to be defined in terms of traditional educational qualifications and also through the

pressures of powerful interest groups in which university graduates are largely or exclusively represented. The pressures exerted by a growing number of occupations for which upgrading or full professional status is sought also play a significant role in hindering changes in the traditional degree structure (See Part Three). Finally it should be said that the educational world itself bears a major responsibility for this state of affairs in that as an employer it seems to stress more than any other sector the importance of traditional qualifications for recruitment and promotion purposes.

The main point to underline is that a change in supply from comparatively few types of general degrees to a wide range of specific credentials is likely to modify job definitions and employers' recruitment practices. The sheer quantity and variety of specific credentials will make them less useful as mere screening devices, but if they succeed in transmitting detailed information about the nature of courses followed, they are likely to provide a more solid basis for employers' decisions. Except where granted by highly selective institutions or systems, the university type degree has in any case lost much of its informative value, particularly in cases where a variety of optional courses and specialisations are possible. There is need, therefore, for a redefinition of degrees, away from their status symbol and social connotations, as one of several milestones along a continuum defining the educational level reached by students.

The existence of such a continuum would allow for a more flexible definition of occupational profiles in the interests of individual career development, thus avoiding the curious situation in which the training for newly-created and upgraded professions has to be fitted to the traditional higher education structure of each country. The fact than an economist is trained in 3 years in the United Kingdom and in 6 or 7 years in the Netherlands, is probably due less to a difference in the functions they are expected to fulfil in their respective societies than to the need to define educational requirements in terms of the accepted norms of university qualifications in each conntry. More than any other change, the reform of the university degree structure is a long-term process of political dimensions, not unrelated to the existing power structure in society.

There are, however, in several Member countries, signs of slow changes in the process by which credentials are awarded; they are likely to bring about modifications in the patterns of access to professions and certain occupations. At present, in spite of a wide range of variations, two global types of educational credentials, implying different certification processes, can be roughly distinguished:

a) those which certify successful completion of a certain level and type of studies. Typically, these are general university degrees or diplomas in the arts, social sciences and, to a less extent, pure sciences, geared primarily to the requirements of the educational system, either by providing the input into the next level of the system (i.e. graduate studies) or the teaching staff for the lower levels. While traditionally highly valued, particularly for providing indications about non-cognitive traits (capacity for analytical thinking, trained mind, disciplined work, etc.) the social and economic value of this type of degree has manifestly declined in the recent past. The rapid expansion of general degrees, usually awarded by the open access or less-selective sectors of the educational system, combined with a decrease in the absorptive capacity of the educational system, has led to an unusual - and unexpected - influx of degree-holders on to the labour market at a time of economic stagnation. While the strong academic orientation of these degrees now handicaps many of their holders, there are still wide variations in terms of opportunities, depending on the degree of selectivity of the schools or branches awarding them. In decentralised countries like the United States, the value of a Bachelor of Arts depends on the particular school awarding it. Similarly, such differences exist between the French "licence" and the more selective German or United Kingdom first degrees. Arguments against the use of educational credentials for screening purposes and claims that they are being inadequately used as surrogates for competence mainly refer to these general degrees (1);

b) in the second category, typically found in professionally oriented training, educational credentials certify both successful completion of studies and guarantee that individuals have acquired minimum qualifications for pursuing a particular profession or type of occupation. These minimum qualifications may refer to knowledge and skills required for middle level manpower and emphasise the non-cognitive aspects for top occupations. In general, admission to this type of training and the award of the corresponding credentials tends to be more closely regulated both because of the accrued responsibility of the educational system in the certification process and because flows tend to be more oriented by estimates of manpower needs.

) See Part Two.

The certification process becomes more selective when educational credentials, explicitly or implicitly, are assigned a licensing role in the sense that they provide the only access route into the professions. The higher the status of the profession, the stronger the selection mechanisms tend to be. In many countries it is now being argued that all too often these stringent selection procedures are being used less in the interests of society and more and more to maintain the prestige and level of rewards of certain professions. The debate is a particularly sensitive one in view of the great power of many of the professional groups under attack and of the difficulties in determining at what point selection and certification procedures cease to be primarily geared to serving and protecting the public and become self-protective devices. The only obvious cases are those where, in spite of manpower scarcity within a certain profession, access to training or entry into the profession is subject to tight restrictions. The example most often quoted is that of medical studies.

It should be noted that users of credentials, although not in direct control of the certification process, can in practice assign a licensing role to both general and professional oriented credentials. Typical cases are public administrations and large industries where entry into certain occupations is exclusively reserved to those who have university degrees, and where, contrary to what happens in the professions, the discipline or specialisation is often irrelevant. The fact that in many cases a degree has ceased to be a sufficient condition for entry but remains a necessary one, has led to a series of apparently paradoxical situations, which appear coherent however when looked at from the individuals' (and employers') points of view. A relevant example is provided by the behaviour of many students who, in the absence of alternative routes to these high-reward occupations, pursue studies leading to devalued degrees so as to be able to enter the competition for jobs, even if this implies high risk of unemployment of underemployment, in view of the accrued chances of being screened out during this last stage. One conclusion that may be drawn is that degrees do not automatically lose their attraction when they cease to guarantee a high level job, but rather when they cease to monopolise access to such jobs.

b) Concluding remarks

It was noted at the beginning of this chapter that several European countries seem to aim at strengthening the professional orientation of post-secondary education and that they may diverge from the North American pattern of development by not necessarily providing

large free access sectors, mainly of general education, within formal systems. Such a model essentially implies that higher eudcation institutions will maintain, or even increase, their selection and certifying role for employment and that training and credentials will be more closely adjusted to professional profiles and occupational roles.

A crucial problem in setting up this model is to ensure the acceptability and legitimacy of the selection process as performed by educational systems. This explains the growing concern for admission policies at post-secondary level and the search for assessment procedures and criteria responding to pressures for greater social justice, for increased efficiency (i.e. predicting future performance) and to the rising concern for standards. The solutions proposed by different countries necessarily vary according to the priorities in each national context.

A second important prerequisite for the viability of such a model is that it does not create a large pool of unsatisfied demand, that is, of individuals wishing to enter but unable to do so in view of the limited places available. This is primarily a question of organising the supply of education, i.e. of creating various possibilities of attendance within the largely professional sector and of creating meaningful educational alternatives outside the formal framework. But, more important with a view to decreasing the "social attractiveness" of higher education, is the adoption of social and economic measures designed to facilitate change in the system of external rewards which at present unduly benefits precisely those occupations with a high concentration of degree holders.

Having acknowledged the need for an agency that selects and certifies people for attractive social positions, the European countries seem to choose to maintain these functions within the formal education system, at least at the post-secondary level. The policy is consistent with the view largely accepted in most European countries that fewer risks are involved in having the State and its agencies assume these responsibilities than in leaving them to other institutions outside their control.

In the United States, and to a less extent in Canada (with variations according to provinces), there seems to be far less agreement as to the role of formal post-secondary institutions in the certifying process. Certain problems are similar to those in Western Europe, but given the great differences in organisation and control of post-secondary institutions, the stronger or more direct influence exercised by outside pressure groups (e.g. professional organisations) and the often limited power and responsibility of public authorities, the nature of the debate and the solutions proposed differ considerably.

As in the European case, some critics are arguing in favour of stressing the distinction between credentialling practices in general education and in job-related training, and having a clearer separation between degrees which are general indicators of intellectual interests but not related to occupational competence and credentials which are strictly and legally job-related. Such proposals are intended, on the one hand, to safeguard liberal education and prevent it from being distorted by the excessive use of the Bachelor of Arts degree as entry tickets to all professional and graduate programmes. On the other hand, it is claimed that this separation would provide for greater accessibility to job-related credentials for individuals who acquire the necessary competencies and skills outside the formal system. A central point in this argument is that post-secondary institutions should focus on the provision of general education and cease to monopolise the job-related certification process. This strategy in fact suggests assigning to the formal post-secondary education - at least at the undergraduate level - the opposite role to that in European countries.

While there is certainly no agreement in the United States on the balance to be achieved between liberal arts and professional oriented education in undergraduate studies, there seems to be far more acceptance of the principle that post-secondary institutions should cease to have the monopoly over the award of professional qualifications.

More confident in the advantages of pluralism and free competition than their European counterparts, the United States approach seems to be that of providing a wide range of possibilities through which individuals can be certified both within the formal education system (e.g. rapid development of non-traditional schemes of study) and outside it. While some stress the need for internal reforms and the development of new schemes of study and certification procedures within the formal system, others suggest the setting-up of independent certifying agencies. The Newman Task Force has recommended the establishment of Regional Examining Institutions designed to provide a variety of evaluation and credentialling services (1). The External Degree of the New York Board of Regents is already performing this function on a small scale. Contrary to the certifying boards in the United States that represent the final stage of the formal credentialling process required for entry into certain professions, these agencies would assess and certify all individuals seeking their service, whether or not they attended accredited post-secondary institutions. Furthermore, they would be under closer public control than existing professional certifying boards.

1) Second Newman Report : National Policy for Higher Education, M.I.T. Press, Cambridge, Mass., 1973.

Those favouring a clearer separation between the certification process leading to general degrees and that geared to job-related credentials refer not only to the benefits accruing to individuals but also pay great importance to efficiency considerations. The claim is that certification should be based on the actual competencies of individuals - however these were acquired - rather than on general degrees considered to be inadequate surrogates of competence (i.e. they inform about the number of years students have attended a post-secondary institution but say little about the actual qualifications of their holders).

This concern for efficiency (in itself a value-loaded concept) has been one of the factors behind an important and controversial movement in the United States in favour of competency-based curricula, assessment and certification. A good deal of effort and resources has been spent in the conceptualisation and implementation of the competency idea, but after a few years of experimentation much of the original confidence and enthusiasm seems to have declined. Like many well-intentioned strategies aimed at a detailed specification of goals and greater objectivity of the education and training process, when put into practice they tend to emphasise not necessarily what is more relevant but what is more amenable to measurement and assessment. A review and evaluation of the American experience with competency or performance-based programmes and certification procedures would be useful in the light of present trends in post-secondary education in many Member countries.

Such a review would need to be seen as part of a broader effort to foresee and identify many of the problems and issues underlying the development of modular structures of studies and the trend towards more specific credentials, similarly aimed at a greater explicitness of the goals to be achieved, but by the same token likely to under-estimate or ignore less manifest but equally valuable aspects of the education process.

Part Two

USES OF CREDENTIALS IN EMPLOYMENT

I. INTRODUCTION

There are two ways of analysing the issues of credentialism in employment. A macro-economic analysis would be concerned primarily with the overall distribution of manpower with various qualifications between different occupations and sectors of the economy. A micro-economic analysis is concerned with the implications for the thousands of individual employers and millions of individual workers who constitute "the economy", of the use of educational credentials as criteria of suitability for recruitment to various occupations. This part concentrates on the second issue; taking the view that credentialism was not an obvious problem in a situation of full employment when anybody seeking work could find it in an area not too far removed from his interests and qualifications. However, even in such full employment conditions there may be a loss of potential output if the education and training of specialists is not related to employment needs but, of course, full employment will disguise the effects.

A micro-economic analysis gets behind such general considerations. It is necessary to recognise, however, that macro-economic policies of full employment can do much to mitigate the hardships and inefficiencies that may be caused by excessively rigid reliance on credentials.

In the past decades there has been an increase in the number of workers employed in large, complex and impersonal organisations, particularly as a result of the expansion of the public sector. The advantages and disadvantages of these developments are not the subject of this chapter. The concern here is that these characteristics of the employment situation have a marked effect on relations between potential employees and employers. Large enterprises, particularly those requiring any significant amount of skill, are more likely to recruit their workers from a national or international rather than a

localised labour market. Firms then often invest a considerable amount of resources in providing specialised training for these skilled workers. They are naturally anxious to recruit only those people who in all probability will be able to take advantage of such specialised training. Where economic processes are complex, the need is for a large number of different specialists to work closely together on the basis of their professional competence rather than their personal relationships. Thus it is claimed that impersonal certificates of competence are more relevant than common cultural or social characteristics. Finally, in addition to the two factors already mentioned, the growing belief in most countries that "fairness" rather than personal preferences of employers should govern employment opportunities means that jobs and promotion prospects have to be allocated on an "objective" and impersonal basis. Objectivity in this sense is understood to be the probable ability of the individual applicant for a job to make a useful contribution to the productivity of the enterprise.

Most employing organisations exist to provide goods and services in a manner that is "efficient" according to some criteria or other. Public sector employers do not always have the same immediate pressures to maximise their outputs. They are, however, under even stronger pressure than private employers to be seen to be "objective" in their recruitment procedures and not discriminating against any individuals or groups. Employers recruit large numbers of diverse specialists from among a pool of potential recruits about whom they have imperfect knowledge. Therefore, they usually have to rely on stereotyped information about the probable performance of individuals on the basis of easily observable characteristics. A meritocratic educational system orientated towards equality of educational opportunity and at the same time permitting diverse educational outcomes, based on the ability and interests of individuals, could be an excellent instrument for providing employers with reliable information, if it is assumed that certification of success in particular educational experiences is a good indicator of probable success in subsequent employment.

When the meritocratic basis of education is undermined by expansion resulting from a widespread belief that educational selection is inequitable or inefficient, the informational content of educational qualifications changes. Employers become confused about the signals coming to them from the educational system and potential employees find that their expectations about the employment value of their educational qualifications are disappointed. This lies behind the origins of the recent concern about credentialism.

The situation is further complicated by the fact that there are many different kinds of credentials, used in different ways. In order to be able to evaluate the implications of the use of credentials in the labour market, it is necessary to bear in mind the purposes they serve. Much of the criticism of credentialism is apparently based on the belief that employers or society at large are behaving irrationally or inequitably in using normal educational qualifications as criteria for determining the employability of individuals.

In discussing the uses or the abuses of credentials in the labour market, it is important to distinguish between their inherent advantages and disadvantages and the problems stemming from the need to make short-term adjustments in a changing situation.

Many OECD countries are at present quite clearly experiencing problems of short-term adjustment. The arrival of large numbers of educated persons on the labour market has not, since the early 70s, been matched by a corresponding increase in career opportunities to meet their expectations and aspirations. The traditional uses and functions of credentials and the accepted relationships between level of education and level of occupation are subject to severe strain and often break down. This report discusses the utilisation and relevance of educational and occupational qualifications and some of the relationships assumed to exist between education and employment. We begin by considering the uses made of credentials in employment.

II. THE USES OF CREDENTIALS

The use of credentials can be considered from four different perspectives : employers, employees, professional bodies and society at large.

a) The use of credentials to employers

Recruitment of personnel is a major task for modern large scale economic organisations. They want to recruit the individuals who are likely to make the best contribution to the work of the enterprise; they also have to be able to justify their choice in various objective ways to a society that is increasingly concerned about discrimination on ethnic, social, religious or sex grounds. They therefore need to recruit people not only well qualified but able to demonstrate objectively that they are well qualified - who in a certain way can legitimate their claims through their formal credentials. For public sector employers such pressures are particularly strong. Increasingly, as occupational tasks become more specialised, employing organisations

are required to devote substantial resources to the specific training of their new employees. Furthermore, collective bargaining and legislation is increasingly providing employees with security of tenure. All these factors make recruitment decisions extremely critical ones. A bad decision can not only cause tensions with the existing workforce, it can be expensive in training costs, and enterprises may have to live with their wrong decisions for a very long time.

b) The use of credentials to individuals

For many generations educational credentials have provided well-signposted routes to certain types of job. For young people of lower social origin they were an important path of upward social mobility. Those who succeeded in education or apprenticeships knew more or less the opportunities that their investment of time and effort opened to them. Their credentials offered some protection against nepotism and guaranteed their social and professional position. The "implicit contract" was that a good education leads to a good job and the better the education the better the job. Better education in practice often meant a longer education. In the United States, the desire of immigrants to send their children to college and thus give them a good start in life has passed into American history books as one of the fundamental examples and explanations of middle class development and in many ways typifies the "American dream".

The disillusion which is felt today by many leavers from all branches of education is due mainly to the fact that the accepted relationship of level of education and level of job has become much looser. The "implicit contract" is being broken and the guarantee provided by credentials in times of scarcity of education is no longer valid.

c) The purposes of credentials for interest groups

The guarantee and protection that credentials originally offered to individuals subsequently evolved into mechanisms which protect groups of workers in given occupations or professions or within particular sectors of activity (1). As far as the higher levels of occupations are concerned the protective mechanisms often resulted

1) See for example : "Occupational Licensing and the Supply of Non-Professional Manpower" in Manpower Administration Monograph, U.S.A., 1970; B. Skimbers, B. Esser, D. Kruger : Occupational Licensing and Practices, Public Affairs Press, Washington D.C., 1972.

(for example in the United States) in the creation of professional associations and institutes which controlled the training mechanisms and sometimes, as in the United Kingdom and Italy, actually awarded the final qualifications. More recently, other occupational groups have attempted to protect their status and prestige through the "professionalisation" of their occupations by establishing similar institutions or associations.

From early times guilds and similar associations were responsible for the training of young workers and the delivery of all certificates in the case of skilled trades and crafts. Today, the responsibility for training and the awarding of credentials tends to be increasingly organised by the State and craft associations together, and in many cases the educational system can now grant equivalent certificates. These certificates are usually recognised in collective bargaining agreements.

In blue collar jobs, however, the role of educational credentials as a protective mechanism has been much less important than amongst their "white collar" counterparts. The categorisation of level of occupation by level of qualification applied to blue collar workers is usually in terms of skilled, semi-skilled and unskilled categories. These refer to actual occupational competences, most frequently acquired on the job or through in-company training programmes. A recent study analysing collective agreements in Italy states:"If one scrutinises the 'declaratoria' corresponding to the divers levels of qualification from the collective agreement examined, one rarely finds the automatic classification in such or such category, according to the diploma possessed : in no case is this the only criteria (1). A recent collective agreement within the French Metallurgical and Mining Industry (2) defines job categories by reference to vocational diplomas, many of which can be acquired in the education system. However, in each case when equating initial occupational level with level of diplomas it is stressed that this level can be "acquired either through school channels or by an equivalent education or through experience". In the United States education credentials seem to play a small part in the collective agreement of blue collar unions as criteria for selection and promotion.

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1) Fabio Taiti : Le passage de l'école à la vie professionnelle: La situation italienne, OECD,mimeo, 1975.

2) L'Accord national du 21 juillet 1975 sur la Classification entre l'Union des Industries métallurgiques et minières (U.I.M.M.) et Les Fédérations de Cadres, Maîtrise et Techniciens de la Métallurgie affiliées à la C.G.C. et à la C.G.T. - F.O.

In Slichter's study on collective bargaining (1), for example, level of education is hardly mentioned ; it is ability, skill and competence which are considered as most important, with seniority also playing a significant role. Where "qualified for the job" is mentioned, the ensuing discussion on the ambiguities of this clause does not even mention educational qualifications, but focuses on ability to meet minimum standards for the job, either through prior experience in temporary vacancies or through the employee's established work record.

This does not, however, imply that credentials and certificates play no part in protecting blue collar workers. The central role of occupational certificates for blue collar workers is illustrated by the bargaining power of the craft union in wage scale agreements where both their own wages and those of other categories of workers are defined according to occupational certificates. Many collective agreements also set limits on the number of apprentices which may be employed, usually by reference to the number of tradesmen employed. Employers frequently accuse trade unions of protectionism because of these restrictions and through their control of the training process.

d) The functions of credentials for society as a whole

The imposition of entry qualifications and formal training requirements, at least as far as they are directly related to the content of the jobs, serves to protect the public from malpractices and inadequate service. In part, the move towards professionalism has resulted from society's demand that specialised services be provided by qualified individuals and not by charlatans or inspired amateurs. Many occupations and professions, from advertising executives to doctors, have a code of behaviour to which all qualified practitioners are required to adhere. This serves as a protection to the public and helps ensure that, in general, practitioners behave in a socially responsible way.

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1) S.M. Slichter, J.J. Healy, E.R. Livernach: The Impact of Collective Bargaining on Management, The Brookings Institute, Washington, D.C., 1971.

III. THE DEVELOPMENT OF EDUCATIONAL CREDENTIALS AS AN INFORMATION SYSTEM FOR EMPLOYERS

Acceptable credentials are not obtained only through public education and training. Originally most vocationally useful credentials were awarded after a period of recognised training under the tutelage of the guild or association of masters of the particular craft or occupation.

It was when certain of these qualifications came to have a much wider currency than that for the particular occupation for which they were intended, largely as a result of the major changes in occupational structures that accompanied the industrial revolution, that a distinction began to appear between the general educational credential and the strictly vocational one (1).

A university degree has for many centuries been an occupationally useful credential in several fields, notably medicine, the law and the church. There were differences between countries as to the professions which attracted the most university graduates: in Germany and Japan at the beginning of the twentieth century most graduates became public administrators, whereas data from the United Kingdom related to the Occupational Distribution of Cambridge University Graduates between 1850 and 1890 show that the largest group of Cambridge graduates (38 per cent) were still entering the priesthood (2). However, few people obtained degrees at all: in Germany, for example, in the early nineteenth century there were only three or four students in higher education for over ten thousand inhabitants (3).

Most occupational credentials were gained through apprenticeships and similar arrangements. Certificates were granted after a long period of training, usually with an acknowledged master in the field, and were seen as a guarantee of minimum competence in the art or craft (4).

1) For an account of these developments in America, see S. Haber "The Professions and Higher Education in America - A Historical View" in Higher Education and the Labour Force, ed. M.S. Gordon, McGraw-Hill, 1972.

2) Morikazu Ushiogi: "A Comparative Study of the Occupational Structure of University Graduates", The Developing Economies Vol. IX - 3 (September 1971).

3) Morikazu Ushiogi: ibid.

4) See for example: A. Visalberghi: "Education and Division of Labour" in Educating Man for the 21st Century, Volume 4., Martinus Nijhoff, The Hague, 1973.

As general education developed, first at primary then at secondary and more recently at university level, public administrations, industry and commerce began to see the value of using certificates awarded by educational institutions as guarantees of general competence either for general employment or for undertaking further specialised training. Concurrently, especially with the development of industry, new kinds of training were developed that either complemented the traditional apprenticeship system or provided training in new fields very seldom provided by the universities, such as engineering. However, the expansion of publicly subsidised secondary and higher education systems has resulted in more and more of such training being integrated into the education system. One of the main mechanisms whereby this comes about can be seen from the recent history of the accountancy profession in Britain. Until the 1960s the major part of training for accounting was through "articles", an arrangement closely resembling apprenticeship. The expansion of higher education in the 1960s resulted in fewer able young people being allowed accountancy training at the traditional age of 18. In consequence the policy of the accountancy profession has become that the bulk of initial training should take place in universities and polytechnics. This has the advantage for students that their training is no longer narrowly specialised, so that they have a larger number of job options than they would otherwise have. The advantage for the profession is that it can now tap a larger proportion of the most talented young people.

Such developments have led to an association between a given level of education or training, whether specific or general, and a given level of function in employment. Today, new forms of organisation and increasing specialisation require more systematic information on individual skills and abilities, so that the interpretation of a vast range of educational qualifications has come to be one of the main tasks of those concerned with recruitment in all but the smallest employing organisations. They must know the meaning of qualifications ranging from specialised PhDs to different kinds of qualification obtained at the end of compulsory schooling by those who undertake no further formal education.

That it is the credential rather than the education itself which is considered important is demonstrated, as one commentator pointed out, by the fact that although in some countries there are " diploma mills " which provide diplomas but virtually no instruction, there are no institutions of higher education which offer instruction but no diplomas (1). This has led to the suggestion that the proliferation of educational certificates at all levels has been due not so much to the desire for equality in itself but to social pressures for educational credentials.

1) M. Blaug : An Introduction to the Economics of Education, Penguin, London, 1970.

77

IV. THE ABUSES OF CREDENTIALS

a) Introduction

We have discussed at some length the purposes that credentials fulfil for employing organisations, individual employees, professional associations and society as a whole. Most of these purposes are beneficial, at least for the professional group concerned. However, the existence of widespread concern about credentialism implies that, in some respects at least, there is dissatisfaction among certain sectors of society with the way jobs are distributed in relation to level of educational attainment. This section examines the various phenomena which have led to the concern now being expressed. They appear to be founded above all on the fact that educational credentials no longer adequately perform the functions outlined in the earlier section.

b) Education inflation

There can be no doubt that in the majority of OECD countries the value of educational certificates has depreciated in the labour market (1). This is the phenomenon sometimes referred to as "educational inflation". Such a depreciation can occur for two separate reasons. First, it may be that the intrinsic quality of the qualification has fallen - a given certificate now signifies a lower level of competence than previously. The second possibility is that while graduates and other certificate holders of today are just as able as their predecessors, the economic value of their qualifications to employers has fallen because the supply has increased more rapidly than the demand. It is, of course, very difficult to distinguish between these two phenomena, and both give cause for concern. However, while for the first the cure lies almost entirely with the educational system, the second must be solved jointly by the educational and employment systems, with the latter taking the lead.

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1) See for example: H.C. Jain: "Is Education Related to Job Performance? " in Contemporary Issues in Canadian Personnel Management, Prentice-Hall, Canada Ltd, 1974; H.C. Jain "Prevalence of Job Barriers in the United States" in Research Projects Group Contract, Project R-37. 1974; R.J. Gaston: "Labour Market Conditions and Employers' Hiring standards", in Industrial Relations, Vol. II, May, 1972.

Both explanations are related to the explosive growth of post-compulsory education in the 1960s, resulting in a large increase in the supply of people with educational qualifications. During the 1950s and 1960s, while the economies of Member countries were growing rapidly, the increased flow of educated manpower was absorbed into employment with few obvious signs of imbalances. Now that the overall growth of employment opportunities has slowed down, there is an increasing impression that in many cases the educational system is not producing people with qualifications best suited to the immediate needs of employers. Conversely, the organisation of employment is often not arranged so as to make the best use of the qualified manpower available.

Above all, the lower rates of recruitment in the public sector, previously the largest employer of educated manpower in all OECD Member countries, have substantially reduced the employment opportunities available. This is especially true in recent years of those with teaching qualifications. Slower economic growth rates have also meant that research and development activities and some areas of employment involved in advanced technology now offer fewer opportunities. Graduates have begun taking jobs previously considered as requiring the levels of education which they have attained. In selecting employees from the increased numbers of educated people, employers have usually adopted the easy solution of increasing the levels and types of formal educational attainment required for entry into certain jobs, even if no corresponding change has taken place in the job content.

With educational requirements being constantly increased and the competitive advantage attached to a given level of credential decreasing as the number of persons with that level of educational attainment expands, a sort of 'educational lock-step' has developed. Many students pursue their studies ever longer, ever higher, in an attempt to regain a competitive advantage in the race for the scarce, interesting and well-paid jobs. The phenomenon called by T. Green and E. Haynes "the moving target" has particular repercussions for those who comprise "the last group of entry" into any level of education (1). By the time this group reaches the target level - which has already given others an advantage in the competition for jobs - the advantages which had accrued to previous groups have long disappeared. Thus many are finding today that the "implicit contract" has been broken and that the opportunities previously offered to individuals with a given level of educational attainment are now closed to them.

1) For a full exposition of the "law of zero correlation", "the group of last entry" and "the moving target phenomenon" see Thomas F. Green and Emily Haynes : "Notes Towards a General Theory of Educational Systems" (Working Draft): Syracuse, N.Y. Educational Policy Research Centre, Oct., 1972.

c) Those left aside

While those who obtain educational qualifications are finding their value has depreciated, the position of those who are left aside in the scramble for some sort of credential or label is becoming desperate. It is almost inevitable that some selection takes place in post compulsory education. At present those who do not measure up to the demands of an academic education are left aside to sink or swim as best they can. When the normal level of education in a country is a high school diploma, those who do not have this level are by definition below normal and suffer in the competition for jobs (1). If there is less competitive advantage in having the high school diploma because it has now become the norm rather than the exception, those who are not able to obtain this credential find themselves at an increasing disadvantage. They are condemned to low-paid unskilled jobs unless, as occurs all too frequently, they are unable to find employment at all.

d) The effect of credentials on career development

Educational and training opportunities are not only unevenly spread amongst members of a single generation, they are also unequally distributed between generations. The expansion of educational facilities at secondary and higher levels is a relatively recent phenomenon. People who completed their initial education before the expansion of upper secondary and higher education in the 1950s and 1960s did not have the same opportunities as their successors to pursue higher levels of studies. These generations frequently find their career paths blocked because they lack the educational levels now required for senior appointments. Younger and better-educated people are often recruited directly to posts which were previously steps on the promotion ladder. With degree holders, for example, now taking jobs at supervisory and junior management level, many occupational certificates which once opened prospects of promotion to these positions are now devalued. Rigidities in employment appear to be growing and although credentials, even at the highest level, are no longer a guarantee of a well-paid job, lack of credentials, or the possession of a devalued credential, tends to bar an individual from any hope of social mobility or promotion. And there has, as yet, been no great progress in establishing the value of work experience as a qualification for career advancement.

1) See for example: S.M. Miller: Breaking the Credentials Barrier, Ford Foundation 1971; J.D. O'Toole: "The Reserve Army of the Under-Employed", Careers Monographs, Department of Health, Education and Welfare, 1971; Strategic Planning and Research Unit, Job Barriers: A Reference Paper Delimiting the Problem, Department of Manpower and Immigration, Ottawa, 1975.

e) Individual aspirations

It is not, however, only older workers who are dissatisfied with the growing emphasis on formal qualifications. Younger and more highly educated generations of workers expect "good" jobs as their just reward for investing many years of their lives in formal education, but find that the opportunities which are available to them do not match their expectations and aspirations (1). To a large extent, a young person's job aspirations and expectations are built on the experiences of his parents' and teachers' generation when educational qualifications were scarce and 'above-average' qualifications (which may now be the 'norm') offered job opportunities which the young with the same credentials now find closed to them. Much of the disillusionment voiced today by young people derives ultimately from the fact that credentials no longer offer the same prospects of employment as previously. James O'Toole has summed up the present situation very neatly:

> "The rub is that no industrialised nation has been able to produce an adequate number of jobs that provide the status and require the skills and educational levels that their workforces are achieving. By way of analogy the situation is nearly Malthusian in its proportions: levels of educational attainment have tended to grow in almost geometric progression while the number of jobs that require higher levels of education have tended to grow at a much slower pace.
> There is thus a disfunction between the expectations raised by educational policy and the inability of the economic order to make good on society's promises." (2)

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1) See for example: A.M. Mood:. "The Future of Higher Education", Carnegie Commission on Higher Education ; McGraw-Hill Book Company, 1973; W.W. Wilms: Public and Proprietary Vocational Training , Centre for Research and Development in Higher Education, University of California, Berkeley, 1974 ; "Manpower Supplement", Nature, Volume 255, May 1975; M.F. Crowley: "Professional Manpower - The Job Market Turnaround", Monthly Labour Review, US Department of Labour, Bureau of Labor Statistics, October 1972 "The Entry of Young People into Working Life", OECD document, Paris 1975; J.J. Kaufman and M.V. Lewi : High School Diploma : Credential for Employment? Institute for Research on Human Resources, The Pennsylvania State University, 1972.

2) J.D. O'Toole: op. cit. page 3.

Young graduates are finding that their degrees and diplomas, especially those in the liberal arts and general education, which once unlocked so many doors, are now a positive disadvantage in the competition for jobs. Employers are beginning to question the relevance of such credentials which do not provide immediately practicable skills. Recently, the term "overqualified" has begun to be used: a term which implies that an employer believes that the expectations and aspirations of an applicant for a job are unrealistic when compared with the real skills the individual possesses or when compared to the job to be done.

f) The intrinsic value of educational qualifications

The discussion of the problems of credentialism in the labour market has been based on the view that the devaluation of educational qualifications has been an economic response to a situation where supply has exceeded demand. However, the possibility cannot be excluded that the intrinsic value to employers of a degree or other educational qualification has fallen. Certainly employers in many countries make such claims in their public pronouncements, and while due allowance must be made for the rhetoric used by employers who want skilled technicians and are offered liberal arts graduates, such claims cannot be entirely ignored, however difficult it may be to test them objectively.

In some ways it does not matter whether employers are right or wrong in their views. If they believe that, for example, university graduates are not as capable as they used to be, the effect on the employment prospects of graduates is the same whether or not the belief is true. The implications for education are of course different: if the belief is correct, some fundamental educational reforms are necessary; if it is incorrect, improved information and closer dialogue among the partners concerned should be encouraged. Unfortunately, such a dialogue seems to become increasingly difficult in some countries as a result of the politicisation of the issues and often results in an open conflict between the different interest groups involved.

V. THE PROCESSES OF RECRUITMENT AND CAREER PROMOTION

Certificates and credentials fulfil two related roles to an individual employer. Firstly they are an aid when he is selecting employees and assigning tasks and functions within the organisation, as they provide an indication of skills and knowledge acquired.

Secondly, the prevailing system of educational and vocational credentials provides a frame of reference when the skill and function patterns and classifications for the internal organisation of work within the enterprise are being designed.

Where the certificates and credentials are vocational in nature and directly related to the work to be performed, the situation both in the initial selection and in the distribution of jobs within the employing organisation is fairly clear-cut : the individual has acquired a minimum level of competence to perform certain tasks.

When the credential is related to vocational skills not directly connected with the task to be performed or with general education, the situation is more complex. It raises all the questions of educational qualifications, occupations and the utilisation of educationally acquired cognitive skills that were discussed and analysed at the beginning of the 1960s when it was widely believed that investment in education was the key to economic growth and social development. Despite the vast amount of research undertaken since then, it is fair to say that knowledge of these relationships has not advanced very much, except in the negative sense - increased awareness that there is no such simple overall relationship as was assumed by early manpower analysts.

a) Employers' attitudes towards educational qualifications

In dealing with the relationships between educational qualifications and employment, three approaches to recruitment can be identified. There is the 'basic raw material approach', which sees the individual as a person with a certain level of ability corresponding to the level of credential attained. The 'value added approach' recognises that, in addition to ability, the individual has acquired something more by virtue of the education he or she has experienced, although this is often less specific than knowledge and skills required by the employer. The third approach, the 'end product' approach, applies to the individuals who are seen as having immediately applicable skills and knowledge which can be put to use without any additional training.

In the past, employers' policies tended to emphasize the 'end product' approach for lower grades of occupations and the 'raw material' or 'added value' approach for the more educated. In recent years, however, this situation appears to have changed for the more educated. Individuals with doctorates, for example, particularly in the United Kingdom and the United States, are no longer as attractive to employers as they were. Employers are increasingly looking for employees with immediately applicable skills.

The slower economic growth in most OECD countries in recent years has influenced employers' decisions about whether to recruit generally educated graduates and provide them with specific training or whether to buy the finished product. Uncertain of their future manpower needs, they may prefer to put less emphasis on the 'raw material' or 'added value' approach, which requires them to train the individual (and bear the costs of this training in a period of economic restraint) and to buy individuals with vocationally relevant training experience as and when needed.

Recent changes in the social and economic climate have also influenced employers' attitudes. The measures introduced in many countries to strengthen job security have resulted in employers' becoming more stringent in their application of selection techniques and putting increased weight on educational credentials as a primary screening and selection mechanism. In the first place it is increasingly difficult in many countries for an employer to dismiss an employee on grounds of unsatisfactory performance, thus making initial selection more important. Secondly, an emphasis in collective bargaining agreements on job security within one company and on constructing career paths for employees, a trend frequently called the 'Japanisation' of work, has tended to reduce an employer's ability to fill any posts other than low or entry level jobs with outside candidates and has encouraged promotion from within. Many companies are finding that, with the increase in the recruitment of well-educated individuals which occurred during the economic boom in the sixties, they have a considerable "stock" of employees who are demanding that the explicit or implicit career promises which were made to them should be fulfilled. It appears unlikely that there are, at present, sufficient promotion opportunities to ensure career paths for all those who could be considered both qualified and able. In this climate employers are realising that external recruitment at any level above entry or low level jobs is likely to have significant social repercussions within their organisations.

Re-emphasis on initial recruitment at the bottom of the job hierarchy rather than at points higher up lends conviction to the claim that the main reason why employers prefer those with educational credentials as employees is that they are more "trainable" and "promotable" than those with less educational attainment. Thurow has argued that trainability is one of the fundamentally attractive features of educated people. Success in education provides some evidence that the training costs of these employees will be lower than those related to training individuals who have not succeeded educationally. The basic educational theory behind this is that those who have the aptitude and the motivation to learn material whose relevance is not immediately clear to them are more likely to benefit from

the training offered by firms, as some of these benefits are also likely to be long term.

b) The effect of recruitment procedures

The mechanics of the process of recruitment and selection within large organisations throws considerable light on the role and functions of credentials in employment. Only rarely are enterprises interested in ensuring that all candidates who could conceivably do a particular job are included in the short-list of potential recruits. Large organisations receive great numbers of applications, many of them unsolicited.

The first objective of such an enterprise is to exclude all those who may conceivably not be able to perform adequately on the job. This can be perceived as a process of risk avoidance and has been described as "screening-out" as opposed to "screening-in". Interviewing and selection are an expensive and time-consuming business, and in times of loose labour markets it is in the interests of an employer to limit the number of applications to be processed by applying some form of pre-selection. Educational diplomas are one of the simplest and most easily applicable criteria on which to eliminate a proportion of applicants or to ensure that their number is limited. In times of abundance of potential applicants, raising the educational or occupational qualifications required for a job automatically serves to reduce this pool of potential employees. It is not the only criterion applied in pre-selection, but it is easier to administer than, say, asking for a brief autobiographical essay or applying a battery of tests to all applicants (1). It is also apparently more objective, since it is provided by a disinterested outside body. This is important to firms anxious to avoid charges of discrimination against certain groups.

When considering the selection and recruitment process in large institutions it is essential to understand the role of the personnel manager involved. The final decision on recruitment is rarely made by personnel or recruitment officers alone. The common procedure is for the personnel specialist to initiate recruitment procedures at the request of a departmental head (either because an employee is leaving, or because of the creation of a new post).

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1) See for examples of pre-selection techniques T.M. Higham: "Graduates in your in-Tray", Personnel Management, April, 1973.

With the help of a job description (1) or through discussions with the departmental head, a brief, usually superficial, outline of the job is produced with a tentative list of qualities and experience required. It is then the personnel manager's job to advertise the post internally and in external publications. It is also his job to pre-select amongst the applicants and to present the departmental head with a short list of candidates whom he considers suitable for the post. He may frequently conduct the initial interviews himself and then recommend that the departmental head sees those he considers most promising. The personnel or recruiting officer in this situation is seen as the specialist, and in this role he needs to be able to present solidly acceptable reasons to the departmental head for his recommendations. In this context, credentials are one of his justifications for selection, something which can be easily explained and understood by the departmental head. If, as is frequently the case, the personnel specialist is unsure of the exact technical or occupational content of the job involved, he is likely to put even stronger emphasis on the possession of a given credential. In cases where he is familiar with both the job content and the personality of the departmental head concerned, he may occasionally persuade the departmental head to see an individual because he feels that, despite his or her apparent lack of suitability for the job, he is outstanding enough to warrant deviation from the accepted standards. The important point here is that the larger an enterprise becomes, the less opportunities there are for the personnel specialist to become familiar with the job content of all the posts in the company and to get to know the heads of departments personally. Thus, in large enterprises the personnel department comes to rely more and more on the formal qualifications required for the job (2).

1) Job descriptions and job analysis. These have been championed as near ideal ways of determining exactly what skills and experience are required to do a particular job. One section of these usually deals with "education necessary". Despite the scientific aura which surrounds these techniques real thorough task-by-task analysis of the job and a detailed comparison with subjects taught by educational institutions is rarely, if ever, done. Where detailed task analysis of the job has been done the job concerned is usually of a routine nature with a low skill content. Job analysis of non-routine, white collar, professional, and managerial jobs is much less frequent. The education element in job analysis and job description is usually set on an ad hoc basis with reference to the prevailing conception of educational level, and fixed according to the examination hierarchy which is currently in operation. Rare indeed would be the job analysis which detailed requirements in terms of specific elements of knowledge having direct application to the job.

2) The study by Michel Crozier: The Bureaucratic Phenomena, Tavistock Publications 1965, argues that such impersonal criteria and rules are an inherent feature of modern bureaucratic organisations which help ensure conformity on the part of their participants in order to reach one of their goal-planned co-operative actions.

c) Promotion criteria

The importance of formal qualifications in promotion of employers to more senior posts is a more complex issue. In most countries the public sector makes much more use than private employers of educational credentials as promotion criteria. The reason for this is that much of the public sector employment produces no clearly defined output, making it difficult to promote employees on the basis of their contribution to the output of the organisation. At the same time the public sector is under particular pressure to be seen to be acting in a non-discriminating manner in its promotion procedures as well as in its initial recruitment. For example, in the United Kingdom, career success in the public service sector is closely tied to the acquisition of formal educational or vocational qualifications. As the Fulton Report pointed out (1): "Those promoted from one class to another usually have better educational qualifications than the colleagues they have left behind them". In the French public sector, open competitive examinations are frequent mechanisms used to govern promotion from one main category to another, while seniority plays an important role in promotion decisions within each category.

The evidence of other employers using credentials as a basis of promotion decisions is less clear cut. Most appear on the surface neither to use them for promotion or salary increments after the first appointment nor to record further credentials gained after the initial appointment. Berg found this theme running right through his interviews with personnel managers in the United States, as has one important British study (2). Many studies attempting to measure the educational composition of occupations have shown a wide spread of educational qualifications across occupations which would support the view that promotion is not based on educational qualifications.

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1) The Civil Service, Report of the Committee under the Chairmanship of Lord Fulton, Cmnd. 3638, 1968, Vol. 33.

2) M. Blaug, M.H. Peston, A. Ziderman The Utilization of Qualified Manpower in Industry; Policy Conference on Highly Qualified Manpower, OECD, 1967.

VI. ECONOMICS OF CREDENTIALISM

a) Credentials as Information

We can combine the discussion so far in the framework of a simple analytic model. Skill labels are a useful social invention, for they provide information about an individual's capacities and abilities where lack of such knowledge is one of the main reasons why the market for human skills is so imperfect.

In such a market, labels are welcomed by buyers and sellers alike. They are useful for sellers (employees) because they may have no other way of showing their potential, especially if they are without experience or are seeking a white-collar post where there is no "tangible" proof of their skills. And they are welcomed by buyers (employers), especially at job entry where even the most expert buyer may not be able to predict a man's productivity in a particular job. For many jobs, successful performance requires a complex mix of cognitive and personality characteristics, and it is far from obvious that an employer could devise his own tests that would predict performance better than an externally determined label. Indeed, the very length of the educational process, with its repeated testing of a varied set of skills, may make it a more reliable predictor; and even if the employer could devise an effective test it is almost certainly inefficient to test skill capacities every time the skill is sold. In short, buyers, sellers and society in general benefit from the cost savings in formal testing and labelling before the start of working life.

Such arguments are all very well at the abstract level. In practice, however, it may that what was intended to overcome the market shortcomings of lack of knowledge may itself become a serious source of market imperfection. Many such imperfections spring readily to mind. The length of educational courses is largely based on historical precedents; curricula are notoriously slow to adapt, and the professionalisation of certain occupations, like medicine and law, invariably results in longer courses as a means of limiting entry to the profession. Quality of performance is unlikely to be measured satisfactorily by most skill labels: the range of certified skills is usually fairly wide, and those who possess similar labels will in fact vary significantly in their capacities. Training costs are also increased: education and training procedures for a given label are nearly always the same for all candidates, but it is unlikely that in practice all require the same amount of training. Finally, there

are many dimensions of skill which are not captured in most skill labels, such as, for instance, quality of performance, which has already been mentioned, and the value of job experience.

All these imperfections can be summed up by saying that their overall consequence is to place a quite artificial limit on the range of an individual's skill capacities. A man is likely to possess many "skills" - age, experience, personality or enterprise - which in a given job may be excellent substitutes for an educationally acquired skill, but if skill labels are applied rigidly all the various substitute skills become valueless. The longer-term consequence is for even a given educational label to become devalued as more people perceive that acquiring such labels is the only way to maintain a competitive position in the labour market. This may further reinforce rigidity in the use of skill labels, and thus provoke a "snowball" model of educational expansion. The paradox of such a process is that even for high level occupations the criteria and qualifications necessary for academic success (hence the granting of a skill label) may come to bear no practical relevance to the various jobs individuals will subsequently have to perform. Employers will complain about the irrelevance of educational courses; employees will feel that much of their education has been wasted. From a societal point of view, the "screening-out" of individuals who lack formal educational qualification and the development of a social selection system based largely on meritocratic criteria have far-reaching implications not only for equality of educational opportunity but also for social equality in its widest sense. In short, a device which started as a useful social invention may come instead to entail heavy social costs.

b) Human capital and job competition

The discussion so far has been based on the costs and benefits of skill labels as a means of providing information, but no attempt has been made to define the type of information, i.e. exactly what is meant by "skill". It has been implicitly assumed that skills are acquired during the process of schooling, and such skills are economically valuable. This is simply another way of expressing the by now familiar argument of human capital economists, that education has an economic value both to the individual who receives it and to society at large because it makes people more productive. Labelling is a socially convenient way of transmitting information about this superior productivity. Severe imperfections in the labelling process may allow certain categories of educated people to earn monopoly incomes, but the basic notion of the economic value of the extra education as

such remains intact. The appropriate social reform in that case is to try to prevent skill labels from bestowing monopoly rights over certain job functions, so that society as a whole will benefit from having a better-educated (and hence more productive) labour force.

There is, however, another interpretation of credentialism which is fully consistent with our earlier analysis of the role of skill labels in providing information. Suppose "skill" refers not to superior productive capacity formed by education but simply means superior natural ability. This interpretation has come to be called the "job competition model" to distinguish it from the wage competition theory underlying the idea of human capital. The starting point is the fact that those who are more able tend to get the most education. Employers, it is argued, are aware of this and so, when a bias in favour of educated people is established, those with most education are preferred for the best jobs. This bias "might be initially due to nothing more than the convenience to employers of a free external testing system: the universities, already existing in adequate numbers, happen to be able to certify, at an absurdly great cost, which are the clever ones. So employers demand degrees, and from there on the whole expansion might be a vicious circle" (1).

Under the job competition theory (and we must interpret the "skill" in skill labels to mean natural ability, irrespective of the reservations that one may have on the validity of such a concept) marginal reforms to remove imperfections in the use of skill labels completely miss the point. If the economic value of labels resides not in the content of education they ostensibly denote, but in their use as a screening device of natural ability, credentialism will by definition be the inevitable result. Information about natural ability (or the supposed lack of it in the absence of a diploma) does of course have an economic value to society, but under this theory the peculiarly wasteful feature of having a generally high level of education is that the screening function of school could just as well be carried out if the general level of education were low, provided there was an adequate spread of attainment. The trouble is that neither individuals nor society have shown a willingness to prevent "wasteful" escalation of educational qualifications. As Wiles suggests each man feels obliged to undertake more and more education simply to protect his position in the job hierarchy, since employers will

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1) P. Wiles: "Die Bauchschmerzen eines Fachidioten". Anarchy and Culture, 1969. Further readings in the economics of job competition are:
L. Thurow: "Education and Economic Equality", The Public Interest, Summer 1972.
K. Arrow: "Higher Education as a filter", Journal of Public Economics, July 1973.
M. Blaug: "The Correlation between Education and Earnings : What Does it Signify? ", Journal of Higher Education, Vol.1 N° 1, 1971.

inevitably raise their entry requirements to be sure of hiring people of the same ability as before. Those successful in getting more education will impose pecuniary diseconomies on those left behind. Since in addition students almost everywhere receive considerable subsidies, skill labelling almost certainly imposes a net social cost. The policy debate must then shift from the human capital perspective of weighing the costs of admittedly imperfect skill labels against the undoubted social benefits of extra education to calling into question the very existence of those social benefits above the fairly low level of attainment necessary to select the brighter people. This rather extreme conclusion points very sharply to the limitations of such theories - whether human capital or job competition - in explaining the realities behind one of the major social phenomena of modern times, the universalisation of education.

One piece of evidence which would considerably buttress the job competition model would be if a strong "sheepskin effect" were to be found. If it is true that it is the label itself which has economic value, one should expect private rates of return to education to be considerably higher to completed courses than to drop-outs. As Layard and Psacharopoulos have shown, there is no clear evidence of this in the United States (1).

In his work on earnings data Eckaus has pointed out that when hours of work are taken into account, "the internal rate of return associated with an uncompleted college education is virtually the same as that associated with the completion of college. The 'union card' interpretation of the effect of the last year of college must now be put aside" (2). All this evidence refers to the United States, but also in other countries there is no consistent evidence that diplomas are vital to the effect of education on earnings.

c) Non-cognitive aspects of educational qualifications

Much of the work on the relationship between educational achievement and employment lies exclusively on cognitive skills, whereas it is becoming increasingly realised that the economic value of education may lie in the affective personality characteristics developed by schooling. There has been much confusion on this point, with some writers assuming that human capital formation means cognitive skills only. Gintis, for example, asserts that to the extent that

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1) R. Layard and G. Psacharopoulos: "The Screening Hypothesis and the Return to Education", Journal of Political Economy, No. 1, 1974.

2) R. Eckaus: "Estimation of the Returns to Education with Hourly standardized Incomes", Quarterly Journal of Economics, February, 1973, p. 128.

cognitive development is not the central means by which education enhances worker success, "much of the existing body of economic literature on schooling must be reconsidered" (1). Wiles too has defined human capital as "what we learn at school is knowledge useful in production" (2). But punctuality, discipline, tolerance and willingness to work regularly and to co-operate with others are just as much human capital formation as learning to read and write, and no analysis of the relationship between education, labels and jobs which fails to take such characteristics into account is likely to be at all meaningful .. If this much is accepted, it makes the empirical analysis of credentialism even harder: if we cannot reliably trace the links between education and jobs even with sophisticated empirical tools, what are the chances of success of measuring education/work-efficiency relationships in terms of affective characteristics such as those Wiles has neatly described as "intelligent conformism" (3).

The ambivalence of the hard research evidence about the use of educational credentials in the labour market together with the absence of any firm theory about what it is that employers are really seeking from educational qualifications provokes the question of whether credentialism is a pseudo-problem. Given both the lack of clarity in the concept itself and a failure at a broad empirical level to document it, should it be seen not as a major problem in its own right but rather as one more symptom of the present general questioning of the role of education in social engineering ?

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1) H. Gintis: "Education, Technology and the Characteristics of Worker Productivity", American Economic Review, Vol. 61, May, 1971.

2) P. Wiles: "The-Certificate-not-Content Hypothesis", Higher Education, January, 1974.

3) Christopher Jencks: Inequality, A. Reassessment of the Effect of Family and Schooling in America, Basic Books, 1972, provides a good example of this. This work was a vast statistical undertaking, and Jencks had no difficulty in demonstrating empirically that variations in cognitive skill cannot explain variations in earnings. Jencks guesses, probably rightly, that schooling would explain more about income variance if his measure of school achievement included affective characteristics, but he is quite unable to substantiate the argument with empirical data.

VII. CONCLUSIONS AND FURTHER QUESTIONS

The above discussion of the role of educational credentials in employment has been meant to raise questions rather than provide answers.

Two quite separate types of issue have been raised: is the use of educational credentials by employers efficient; and is it equitable? The general conclusion of this paper is that, in spite of detailed improvements which can be suggested to present educational systems, it is difficult to envisage any radically different system that would perform the function of credentials for employers, for employees, for professional associations and for society at large.

That some depreciation in the value of most educational qualifications has occurred in most OECD countries is certain. It is equally certain, however paradoxical this may appear, that educational qualifications are increasingly being used by large firms and by the public sector as a basic screening device when new employees are recruited to all but the most unskilled jobs. It is also well established that for many occupations the basic educational qualification needed has been rising steadily. This has resulted in unrealised expectations for many school and college leavers at all levels, though the position of young people with very few or no qualifications is the most acute. There is undoubtedly some tension between older employees with low formal qualifications who would prefer work experience to be the main criterion for promotion and their younger colleagues with higher formal qualifications who in a period of slow economic growth feel they are being held back by less qualified older people.

It is in trying to interpret these rather bald facts that the limitations of present knowledge become apparent.

It is not possible to know whether the tendency for the number of qualified people to outrun the demand for their services is a temporary or a permanent phenomenon. Is it caused primarily by the slower economic growth of recent years or is it the result of a structural imbalance between the level of educational attainment of the population and the nature of jobs that the economy is able to provide? If the former, it can be confidently expected that problems will disappear when economic growth resumes. If the latter, has the mismatch between education and employment been present for some time, but merely disguised when employment levels were high by the fact that everyone got jobs whether they were appropriately employed or not?

There are equally difficult questions about the decline in the economic value of degrees and diplomas. Is the devaluation of diplomas a decline of their intrinsic worth, is it that modern technology puts a lower value on certain types of skill, or is it the normal economic response to a situation where supply has a tendency to outrun demand?

There are no simple answers to these questions, although a number of partial responses could be suggested both for the educational system and the employment sector as well as for public policy. For example:

- if there is a surplus of employable people of all or most categories, the economy is working below full capacity and therefore the solution is to raise the overall rate of economic growth as soon as general conditions allow and at the same time make a serious effort to bring about necessary changes in job structures and the organisation of work;
- if it is considered that there are too many leavers from academic oriented streams, and not enough specialists of various kinds, or that the quality of graduates and school leavers has fallen, educational institutions should be encouraged to redress the balance and introduce necessary changes in the curriculum and structure of studies;
- since the most rigid use of educational qualifications as a screening device occurs in the public sector, governments should take steps to ensure that public sector recruitment policies are as flexible as possible, with due regard to considerations of efficiency and equity; other large employing organisations should be encouraged to do likewise;
- while the depreciation of the value of academic diplomas disappoints those who have invested time and effort in obtaining them, the effect on school leavers without them can be disastrous; while not ignoring the waste of resources caused by graduate unemployment and under-employment, considerations of equity would require that public policy, especially in a time of general economic stringency, should focus especially on the needs of the unqualified and poorly qualified school leavers.

However, these questions go beyond the specific concern with credentialism, and touch on fundamental issues of public policy, and of our societies, which are beyond the scope of this report.

If the view is accepted that the purposes of education cannot be solely, or even primarily, dictated by the needs of the employment sector, however these may be defined, this will have to be reflected in practical decisions of public policy, particularly with regard to expenditure on post-compulsory education, directed to satisfy social demand for education. This was by and large the case during the 1960s. Such policies imply a minimum of confidence in the educational system to adjust to changing needs of society, including economic needs; and that where imbalances appear the responsibility is primarily on the employment system to adjust to the output of the educational system, either by means of additional training or by changes in the structure of jobs and reward patterns.

More recently, with the changing economic and employment situation and the lack of absorptive capacity of those sectors traditionally recruiting large numbers of leavers from general education (education, public sector), there has been a marked move in favour of shifting the burden of adjustment to the educational system and introducing corresponding financial and other measures to increase its responsiveness. The danger that the pendulum might swing too far in this direction is, of course, perceived and voiced by many social groups - particularly the new cohort of students - all of whom are well aware of the political dimensions and long-term consequences of government decisions and criteria for "properly balanced" adjustment between the two sectors.

Part Three

THE ROLE OF CREDENTIALS FOR ENTRY INTO CERTAIN PROFESSIONS

I. CREDENTIALS AND CREDENTIALLING

In the sense in which we shall largely use the word here credentials are rather like travellers' cheques: academic currency which may be spent in the labour market. More precisely, they are a guarantee of acquired knowledge or skill which in some cases may be the knowledge or skill corresponding (in the eyes of the guarantor at least) to a particular set of tasks. Occupational roles are sets of tasks subject to an on-going process of redefinition. The set of tasks which properly correspond to a particular occupation may be the subject of dispute (as when there is a 'crisis' within a profession, such as social work, as to what its proper role should be - or when there is a disagreement between two related professions, such as doctors and nurses, as to who should do what). It may be affected by a process of differentiation (as when two distinct occupations emerge from one previous one, as has been common in the engineering field) or by a process of integration (as happened with the unification of social work in Britain). At the same time more gradual processes of re-definition may take place, as when members of an occupation begin to be employed in new environments (e.g. architects in public bureaucracies) or demonstrate an ability to handle pre-existing tasks (e.g. accountants in management). At the same time, also, entirely new occupational roles can emerge, whether as the response to the availability of new technologies (e.g. computers, data processing), or to the pressures of an academic discipline bursting its normal banks and seeking new outlets (e.g. sociology).

It follows that the relationship between a body of knowledge or skill and competence (in any objective sense) to engage in a particular socially described occupation is subject to two sets of uncertainties : those deriving from the relations between knowledge/skill and a particular set of tasks ; and those deriving from the tasks which at any moment go to make up the function of the given occupation. Credentials, in this ideal sense, are fragile things. We shall go on later to show how different is the real world.

Credentials also take other forms which, though they will not really be our concern here, deserve mention. There are those which are a currency designed principally for use within the academic system (e.g.to regulate transitions) but which may acquire some economic significance. Then there are those which were intended as, or have become, surrogates for failure. It has often been argued that the Master's degree in American higher education has become precisely that. It then has what sociologists, following Goffman, call a "cooling-out" function (1). The importance of this function, of which many examples could be given, demonstrates the weight which society attaches to credentials. In this study we are concerned only with credentials designed for use in the employment market, and intended to guarantee competence in a specific occupation (though perhaps with other functions beside).

'Successful' credentialling processes will thus guarantee to society a supply of practitioners who are, and who remain, competent to carry out a certain range of jobs,available at reasonable cost. This definition is more complex than it seems. It implies that the mechanisms controlling various aspects of the credentialling process (whether operated by the State, by the occupational association, by the formal education system, by the market - or by some combination of all these) ensure:

i) an adequate supply. 'Adequate' may imply equilibrium with (economic) demand or with social 'need'. 'Need' is not an economic concept, but a socio-political one, typically interpreted differently by various participants in any policy debate. Whether some definition of need, or demand, is the proper basis for planning supply of a professional service has sometimes been the subject of argument. This happened in the U.K. with respect to planning the production of scientists and engineers in conditions of unemployment (2).

ii) competence. Definitions of competence change with advancing knowledge as well as with differentiation and re-aggregation of tasks. A man who had been trained in medicine in the nineteenth century would not be competent to offer many of the services available to the present-day physician or surgeon, nor would a nineteenth century architect be competent to work with many present-day building materials. Continuing competence implies retraining which takes account of changes in knowledge and in tasks during an individual's working life.

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1) See Burton R. Clark: "The 'Cooling-out' Function in Higher Education", American Journal of Sociology LXV, May, 1960, pp. 569-76.

2) K. Gannicott and M. Blaug: "Manpower Forecasting in the U.K. since Robbins: a Case Study of a Science Lobby", Higher Education Review, 1969.

iii) available at reasonable cost. This implies that, whether through the market or via some more centralized control mechanism, individuals or institutions requiring a service should have access to it. It should not be denied them on geographic grounds (as is true of health services in some countries) or on cost grounds (as lower income groups may often have been denied legal advice). But equally, the cost should not be at such a level that those offering the service cannot live!

iv) range of jobs. For what jobs is it proper to demand credentials? That is, for which of the services it requires is society (individuals, employers) wise to demand the kind of guarantee of competence that a credential (academic) offers? Such guarantees seem appropriate where the service entails a stake in life or liberty, especially where they are backed by the ethical codes and sanctioning systems of the traditional professions. But where to draw the line - especially when, as we shall see, dysfunctions can in practice follow? It is necessary to recognize that society's interest may not always correspond to the interest of the suppliers of the service, who often see credentialling as part of the professionalisation process leading to higher social and economic status.

In addition, other social values may impact upon what we choose to regard as a successful credentialling system. 'Equality of opportunity' (however ambiguous its interpretation) is now a basic value of educational policy. Individuals should not be denied education from which they can profit on grounds of sex, race, or (parental) income. Because of the real life connection between credentialling and the educational system most people would think it improper, too, for individuals to be denied access to (most at least) of the credentialled occupations on these grounds.

II. INTEREST GROUPS

The real-life situation in each of the relevant dimensions of the credentialling process (e.g. supply, access, education/training, distribution, costs of service, role) depends upon the interaction of interest groups upon the distribution of power. The State, professional associations and trade unions, consumers and employers, the academic system and the students - each will often have its own interests and values and propose policies which support them. Their relative influence differs between countries and between occupations. Johnson (1) has in fact proposed a characterisation of occupations

1) T.J. Johnson: Professions and Power, London, Macmillan 1972.

based upon the distribution of control over the occupation. Professions are then defined as occupations in which the occupational group (those doing the job, offering the service) are able to impose their own definition of the producer-consumer relationship. This is the case, for example, in medicine, where the doctor (not the patient) decides what the treatment shall be. Professions, unlike other occupations, are able largely to control admission to the occupation, fees, and education. (Such control may frequently not be in the public interest.) (1) Johnson makes the point that only "where an occupational group shares, by virtue of its membership of a dominant class or caste, wider resources of power" will control of this kind be achieved. It then becomes necessary to recruit as much on the basis of status (ascription) as of achievement. Other forms of control are distinguished. In some occupations the customer (or employer) may largely determine the conditions of work, fees, etc. Training will then be geared to the expressed demands of the employer (customer) rather than to any clearly articulated occupational viewpoint. Accountancy may be an example of this. So would the employment of many technician grades, secretaries, clerks, and civil servants. Finally, the State may intrude into the relationship between the occupational group and the consumer of its services. In the social services for example, it is neither the social work profession nor their clients who determine what services should be offered, where, how; what the rates of pay should be, and so on: it is usually the State.

Mediation between producer and consumer need not be by the State, but may on occasion be by another occupation (e.g. the medical profession in relation to nursing, physiotherapy, radiology, etc.).

Whilst the consequences of the various forms of control remain to be investigated in detail, one or two derived hypotheses may be given here.

Professional control may lead to 'selective innovation'. Innovations in organisation which may reduce professional autonomy (e.g. "socialised medicine") may be resisted. So may a variety of educational innovation: a student-centred approach which acknowledges the educational value of individual experience may be regarded as reducing the degree of professional homogeneity; 're-training' may be regarded as a potential infringement of the authority of the senior (most out-of-date) members of the profession.

Employer control may lead to a resistance to theoretical knowledge, to research. Occupations in which practitioners define their roles in terms of customers' (and usually employers') needs may set little store by academic knowledge, but wish simply to acquire proper

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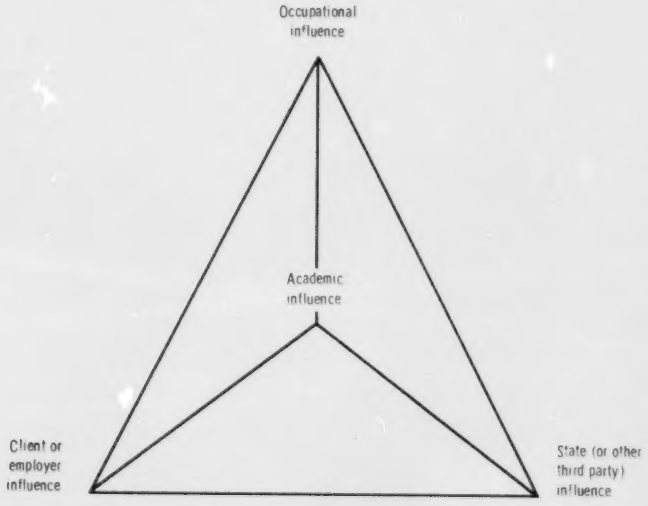
1) See The Monopolies Commission Report on Professional Services, London, HMSO, 1970.

problem-solving ability. It may follow that admission, education, etc., will by-pass university institutions, since the latter will despise the instrumental nature of their knowledge. In accountancy in the United Kingdom, for example, training is largely by an apprenticeship system ('articles'): degree courses in accountancy are rather rare.

The nature and significance of the selection/screening process may differ between profession and customer-controlled occupations. In the former a restriction on numbers is probable, and the criteria upon which individuals are admitted even as student-members of the profession are likely to be heavily biased by considerations of social class and parental membership of the profession (self-recruitment). In the latter numerical restriction is unlikely (for economic reasons). The selection process will set great store by practical experience, and there is likely to be general unwillingness to see relevant training wholly taken over by the universities.

The locus of control in individual occupations can be shown in the following schematic fashion:

Figure 1



The various occupations will then be distributed within the three-dimensional space of this tetrahedron: medicine, for example, being near the apex, the newer 'professions' on the 'floor'. In the U.K. the influence of occupational bodies (professional associations) is rather greater in many spheres than is common elsewhere.

III. THE PATHOLOGY OF CREDENTIALLING - "CREDENTIALISM"

We have now characterised a 'successful' credentialling system in terms of the interests of society, with implications for education/training and supply/cost, and suggested that in practice such matters are regulated by the interaction of various interest-groups. A priori generalisations as to how the results of this political process actually compare with the ideal are obviously not possible: much of this study will be devoted to pointing out differences between occupations and between countries, and to seeing what regularities do exist. But it is possible to speculate as to the most obvious dangers: the ways in which theory and practice are quite likely to diverge. This is the pathology of credentialling, the social implications of which have sometimes been labelled 'credentialism'.

Two pathological states, each with a variety of sub-states may be distinguished. First, credentials may not correspond to task competence. Second, supply and cost (however regulated) may not correspond to social requirements.

1. Dissociation of credential and competence

Training programmes may not develop necessary skills. Those based on formal educational institutions may become too academic/theoretical; those based on an apprenticeship scheme may provide no instruction but only underpaid employment.

Once acquired skills may simply be lost or become obsolete, in the absence of retraining (and perhaps re-certification). New knowledge and new technologies become available. The tasks which fall to a given occupation are subject to various processes of expansion, differentiation, etc. (For example, the sorts of sicknesses which the family physician is faced with change; we may note the decline of polio, the rise in venereal disease and mental disorders.) Obsolescence may be made worse by resistance to compulsory retraining and (often) to curriculum flexibility. On the other hand it may be apparently reduced (though at some cost to society) by professional resistance to role modification.

Formal education may impose a hierarchy of status or interest upon the variety of tasks that face the practitioner. The social worker, for example, may emphasise those of his tasks requiring 'professional judgement' (such as whether a child should be fostered, or go into care) and ignore the more 'mundane' aspects (such as arranging home helps) of his work.

Those who have developed and demonstrated competence over years of experience may not be certified, either because prior formal training is now required (perhaps for status reasons) or because they cannot satisfy parts of the competence-testing procedure.

Promotion criteria may make formal credentials a sine qua non of occupational advancement, irrespective of their actual relevance, so that many competent practitioners are held back.

2. Problems of supply and cost

Inadequate supply can be caused in many ways. Practitioners, through their professional bodies, can sometimes restrict supply (for financial or status reasons) by manipulation of entry qualifications, pass standards, denial of certification to foreign-trained practitioners. Governments can sometimes restrict supply for reasons of public economy. Academic institutions can sometimes restrict supply in order to attain or maintain elite status or to preserve favourable (pleasant) staffing ratios.

Occupational associations may in some cases have a monopoly position in which the costs of services may be too high for much of the population. (Government may then have to introduce schemes of medical or legal aid, for example.) (1)

There may be an imbalance in the distribution of practitioners either between geographic areas or between types of work. (In the U.K., for example, there are incentive payments and other mechanisms for directing medical practitioners to under-supplied areas. Their effectiveness has sometimes been doubted.) Maldistribution (in terms of social need) of medical practitioners among the various specialisations may also exist.

These are some of the pathologies of the credentialling process. (There are others, such as restriction of access to an occupation on the basis of socio-economic class, race, or sex, for reasons of 'professional status' to which we have referred earlier). Part of our task in the analysis which follows will be to see how prevalent they are, where, and why.

We may conclude this note on 'credentialism' with the following quotation from the recent Report to the Secretary-General of the OECD by an ad hoc Group:

"The objectionable aspect of educational credentialism occurs when it is used as a monopolistic device to restrict entry to

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1) Of course the opposite situation may arise (especially with a monopoly employer) in which the costs of services (the income of practitioners) is set too low. This too can be a social problem, leading almost inevitably to inadequate supply.

certain professions and trades, thereby imposing a meritocratic rat-race on the educational system. Credentials which were established initially to protect the public can become a means to protect vested interests. This appears frequently to have been the case in certain of the medical professions. In most countries an experienced hospital sister or district nurse who wishes to join the more highly-paid ranks of the doctors must start medical training from the beginning, along with completely inexperienced school leavers. Indeed, even this is often impossible because of prior and - from the viewpoint of experienced nurses - largely irrelevant educational qualifications necessary to embark on medical training. This kind of situation is repeated in other professions and trades in many countries ...." (1)

IV. STRUCTURE OF THE REPORT

The remainder of this report is based upon a series of case studies carried out in the U.K. (2) France (3), and the Federal Republic of Germany (4), and upon additional information relating to Sweden and the United States. The case studies each relate to a number of specific occupations, as follows: accountancy (Sweden, UK, USA); architecture (UK); engineering (Germany, UK); computer science (Germany); law (France); nursing (Sweden, UK, USA); social work (France, Germany, UK); teaching (Germany, UK); sociology (Germany).

What these occupations have in common is a mode of practice based upon formalised (and to varying extents theoretically based) knowledge; a great (and increasing) concern with the qualifications of those who practise; and a conscious belief (rooted in occupational ideologies) of society's need for their services (a belief which is generally shared by society at large). We cannot, of course, say that these occupations are typical of the occupational structure: in the UK Group 0 of the ISCO classification (all technical, scientific, professional

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1) Education and working life in modern society, Report by the Secretary-General's ad hoc Group on Education and Employment, OECD, Paris, 1975, p.33.

2) S.Blume : "Occupational Credentialling and its Effects", A Case Study on the United Kingdom,OECD 1975 (mimeo.),(English version only).

3) S.Baruch and L.Gani : "Le Rôle des Organismes Professionnels dans le Processus de Contrôle et d'Octroi des Diplômes d'Etudes Supérieures en France : L'Exemple des Professions Sociales et des Professions Judiciaires et Juridiques" OECD 1975 (mimeo.), (French text only).

4) E.Schmitz and P.Weingart : "Knowledge, Qualifications and Credentials, Changing Patterns of Occupations. An Analysis of Six Cases of Credentialling in the Federal Republic of Germany", OECD 1975, (mimeo).

and intellectual workers) comprises only 10 % of the total labour force. However, employment in such occupations has increased consistently for many years (although there are inter-occupational variations, as we shall see) and is likely to continue to increase (see Figure 2). Social demand for these sorts of services seems to increase with the wealth of a community. So we may hypothesize that they are likely to be an increasingly important component of the occupational structure, and that an examination of how credentialling works is likely to be indicative of how, increasingly, people will come to select, and be selected for, occupational roles.

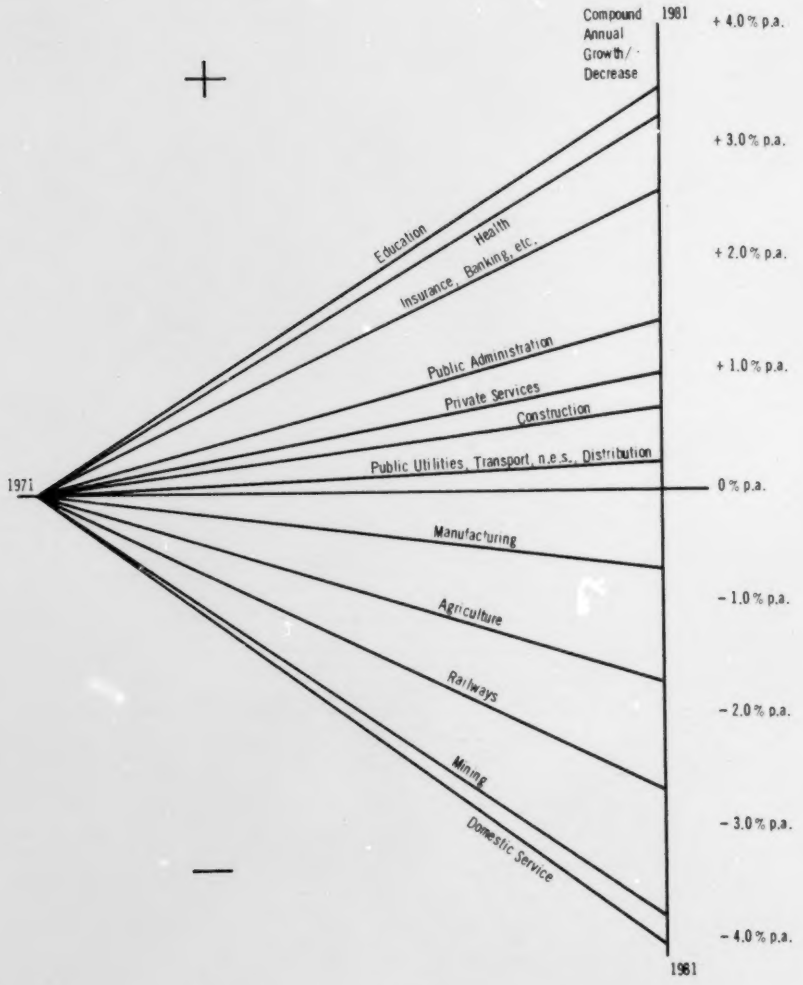
In order to see how credentialling works, and how the process is evolving, the data may be organised in either of two ways, corresponding to two different conceptions of the fundamental determinants. We may assume (as Weingart and Schmitz do) that the interactions between knowledge-structures and task-structures can give rise to a number of different processes of professionalisation (termed by them "problem-induced professionalisation", "active professionalisation", "strategic professionalisation" and "palliative professionalisation"). This orientation implies a probable similarity between what happens in a given occupation in various societies. Alternatively, we may assume (as Gani and Baruch do) that the interplay of vested interests is crucial so that, very broadly, common political culture is likely to ensure greater general ability between occupations within a given society. For purposes of this report we shall adopt both perspectives. In Section V we shall consider three occupations by occupation: social work in France, Germany and the UK; nursing in Britain, Sweden and the USA; and accountancy in Britain, Sweden and the USA. Our objective here will be to see what generalisable statements can be made about the credentialling process within these occupations. In Section VI we shall consider our case study material by country, trying here to obtain national generalisations. Section VII sets out some of the tentative findings of these two analyses.

Specifically, in Section V that follows, we shall compare and contrast the occupations in the following terms:

- Where is the professional training/education given, focusing upon the changing involvement of the formal post secondary education system. By whom is it controlled, in each case, and with what apparent effect?
- The numerical growth of recruitment: who or what appears to determine this rate of growth?
- The educational backgrounds of students/trainees: changes in formal minimum entry qualifications, and their relation to actual qualifications. By whom are standards set (controlled)?

Figure 2

EMPLOYMENT PROJECTIONS : RATES OF GROWTH AND CONTRACTION IN THE UNITED KINGDOM 1971-1981



Source : Department of Employment Gazette, London, May 1975.

V. COMMON KNOWLEDGE AND TASK STRUCTURE

1. Social Work in Britain, France and Germany (1)

The origins of social work in all three countries can be traced back to the early years of the 20th century, at which point it was (rather like nursing in the 19th century) a parochial and humanitarian activity for women of higher social class. In the following years a variety of (what we now see as) rather related occupations came into being: hospital social work, health visiting, child care, occupational health, probation services, and so on. More recently in Britain and Germany, though not in France, many of these distinctions have been abolished. Most of the remarks which follow, therefore, relate to the occupation of 'social worker' in Britain and Germany (the term 'Sozialarbeiter' came into use in 1959), whereas in the case of France we restrict ourselves to just one of the distinct social work occupations (Assistants de Service Social). The maintenance/abolition of this plurality is an important aspect of current French debate. In all three countries social work is provided both by public and private bodies, though the private sector is rather smaller in Britain (in France $\frac{1}{4}$ of all Social Assistants are employed by private bodies, and another $\frac{1}{4}$ by semi-private ones). The occupation is essentially a female one (unlike the probation service, to which it is obviously related). The proportion of women ranges from 99.3 % (France), 81 % (Germany) to 51% (Britain). A major difference is that a state certificate or diploma is necessary in France or Germany in order to work as a social worker, whereas the equivalent qualification is not essential in Britain (and only $\frac{1}{3}$ of all those so employed possess it). The professional body of British social workers (BASW), which makes the possession of this certificate a prerequisite for membership, would like all social workers to be professionally qualified in this way. BASW is the only relevant occupational association in Britain, excluding probation officers, who have their own organisation. It sees itself very much as a "professional" (and "professionalising") body. In France the equivalent body for Social Assistants is ANAS, to which 4,500-5,500 (out of 19,000 social assistants) belong. There is a variety of other professional bodies. In addition over $\frac{1}{4}$ belong to one of a variety of trade unions. We shall see later that the various relevant occupational bodies and syndicates have rather different views on the development of social work as an occupation.

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1) The following sections are largely based on the three national studies by Blume, Baruch and Gani, Schmitz and Weingart mentioned above.

In all three countries the numbers being trained as social workers are rising. In Germany it is estimated that initial enrolment on social work courses has been doubling every two years since 1969. In Britain and France growth has not been so rapid, though in Britain still substantial.

Table I

GROWTH IN SOCIAL WORK TRAINING

	1961	1963	1965	1967	1969	1971	1972	1973	1974
Britain (numbers completing training)	536	851	1179	1427	1934	2344	2590		
France (final year enrolments)			771	921	1377	1514	1423	1584	1466

It is useful to seek the factors which determine these growth rates. First, the occupational ideology of social work seems to involve a commitment to expansion: more and more social workers are said to be needed: this is true in the United Kingdom to an extreme degree. Government policy in all three countries seems to have been expansionist, though to a more measured extent. In Britain and France (as well as in other countries, e.g. Norway) there is considerable competition for admission to social work courses, the numerus clausus being universal. In France, the ratio of applicants to places on these courses varies from 2:1 to 10:1 between institutions. It is clear that the rate-of-expansion-determining factor is the provision of training places. But what (or who) determines the number of such places only becomes plain in the light of the discussion of the organisation of social work training which follows.

Britain

Social work training in Britain is now given in general post-secondary educational institutions: universities, polytechnics, and other further education colleges. It may be at an undergraduate or a postgraduate level. There are no systematic data on the initial qualifications of those admitted to training. However, a recent survey of 926 trainees sent by local authorities in 1972-3 revealed that 36% had degrees (18% in the social sciences); 10% had non-degree-level certificates or diplomas in social studies; and 54% had none of these. We do not know what secondary leaving qualifications they had. About 90% had more than one year's practical experience. We do not know what initial qualifications were possessed by those entering training straight from school. The minimum qualification for non-graduates is 5 'O' level GCE passes, although 'A' levels are preferred for those between the ages of 20 and 25 (minimum age is 20). For those over 25 this formal criterion is relaxed, but applicants need to show that they have the

capacity to benefit from an academic course, as well as some practical experience. In practice, since courses are over-subscribed, students have higher qualifications.

In Britain training for social work is a comparatively new phenomenon. As early as 1907 the Institute of Almoners had issued a certificate, but for many years they were alone in the field. In 1930, training for psychiatric social work started at one college. The Home Office began to sponsor students for the probation service on courses leading to a certificate in social administration in the early 1930s, but systematic training only began following the recommendations of a Departmental Committee on Social Services in Courts of Summary Jurisdiction in 1936. In 1947, the Central Training Council in Child Care was set up, initiating one-year training in universities in the same year. This led to the Certificate in Child Care. In 1954, the Home Office began to place students on university courses of applied social studies to qualify as probation officers. Courses in medical social work also began at two universities, the number gradually expanding to 16 by 1968. The Council for training in Social Work was set up in 1962 and it recognised two and one-year courses leading to the Certificate in Social Work. When the Central Council for Education and Training in Social Work was established by government in 1971, the qualifications awarded by the three bodies it superseded were replaced by the Certificate of Qualification in Social Work. The main task of the Council is to recognise courses. Course organisers may contact the Council and, providing it fits in with the overall pattern of social work training, this course will then be studied by a committee. All recognised courses are reviewed regularly. The Council issues certificates direct to all successful candidates. It plays no role in the examination of students, nor in the funding of students or the financing of courses. Broadly, finance for courses in universities comes from the University Grants Committee, while courses in polytechnics and other colleges of further education are supported by local education authorities.

At the end of 1972 the Council had recognised 130 graduate and non-graduate courses leading to the Certificate of Qualification in Social Work, 30 courses leading to the Certificate in the Residential Care of Children and Young People, three courses leading to the Senior Certificate in the Residential Care of Children and Young People, and nine courses leading to the Certificate in Residential Social Work. The Council itself runs eight short courses for those employed as social workers or social work teachers. Twenty-eight similar courses, lasting for only a few days, are run by other bodies at the invitation of the Council.

The length of the courses varies but the Council has decided that the length of a qualifying training in social work should normally be two years, the main exception being graduates with a social science

qualification for whom one-year training still continues. Discussions are going on as to whether all courses could contain a similar core and if so, what this should consist of. There is no clear or accepted doctrine about any fundamental knowledge that a social worker should have. If the Council achieves its aims three main channels into professional social work would be open to new entrants;

i) a degree, followed by professional training;

ii) a two-year professional training for candidates over 20 without a degree ;

iii) a change of career opportunities for mature entrants (direct entry of some kind).

In addition provision will continue to be made for training unqualified staff already in post, although the Council hopes that the number of unqualified entrants to the service will gradually be reduced. At present, despite the increase in the numbers being trained, it is not clear that this is happening. The output of qualified social workers in 1972 was more than six times the output for 1961 and approximately one in every ten qualified social workers received his qualification in 1972, but the ratio of trained to untrained social workers in employment remained fairly constant (as far as one can tell from available figures). Nevertheless, the Council does attempt to promote training in line with estimated manpower needs of the service supplied by the Department of Health and Social Security.

France

In France the multiplicity of closely related social work occupations, each anxious to protect its individuality, is reflected in a similar differentiation of training processes and institutions. The Diplôme d'Etat en Service Social, which is awarded by the Ministry of Public Health and Social Security, dates from 1932. In what follows we shall largely restrict ourselves to the situation as it affects Social Assistants, though a parallel situation is to be found in other related occupations.

Reflecting the origins of social work training, the majority of schools are still private. Thus, of the 49 which offer the Social Assistant Diploma, only 12 depend upon strictly public bodies. Of these 7 are attached to hospitals, and 1 to the Grenoble Institut Universitaire de Technologie. Some of the 49 train only Social Assistants whilst others have sections for other social work or para-medical professions. Most admit only 30-40 students annually (who will generally need the Baccalaureat and be required to pass an entrance exam. set by the school itself). Thus, taking account of the 3-year duration of the course, there will generally be about 100 trainees in one school at any one time. The small size and meagre financial base of the schools has served as a brake on pedagogic and other innovations; and until

recently most of their staffs were qualified mainly by long professional experience. Since 1971 regular funding from the Ministry of Health has permitted some improvement, and staff are now being recruited from the universities. However it is worth noting that the question of who should train future social workers is a matter of dispute. Should these instructors have a postgraduate (university) qualification; or some qualification awarded in the context of general continuing education, under strictly professional control; or do they need any specific academic qualification at all?

It seems likely that the influence, and the background, of the teaching staff very much determine the training and the professional socialisation of entrants to the schools.

Three distinct groups are involved in instruction. First, outsiders are brought in on an intermittent basis. These may be university teachers (in university towns), or they may be practitioners. The extent to which outsiders are used will depend on the orientation of the school, as well as funds available. Second, there is the permanent teaching staff. This usually consists of ex-professionals with little or no specifically pedagogic training, who function as educators, counsellors, administrators ... and as role models for their students. Third comes the group which guides the students in their practical work (monitrices de stages) - practical work playing a very important role in the training process. The monitrices de stages are social assistants prepared to guide trainees in their practical (case) work. This practical training generally consists of confiding certain cases to the trainee, more or less under guidance. Since the monitrices, at least until recently, were in no way prepared for this kind of task - which might be a considerable addition to an unreduced and heavy work-load - the situation has tended to reflect much that is worst in an 'apprenticeship' scheme. However, it appears that some thinking is now going into the proper relations between 'field' and 'school' work.

Gani and Baruch emphasize how great is the control which these educators exercise over the occupation, not only because of organisational factors, but because of their 'control' of the professional model presented - unchallenged - to students. From this follows the very considerable opposition to the absorption of social work training by the university system: "These ex-professionals-become-educators defend themselves against integration with the university because in university terms they are nothing ... they are educators only by virtue of professional experience ... There is thus, at the same time, an individual defensiveness on the part of the educators, and a collective defensiveness on the part of the institutions ..." (1).

This occupational ideology, protectiveness, is manifest in other

1) Gani and Baruch, op. cit.

ways also, amongst them the criteria used in selecting students for admission to the schools. Finally, the examination leading to the Diplôme d'Etat consists of a theoretical and a practical part. The student who fails the former but succeeds in the latter may be employed as an auxiliary : the opposite is not the case. At any event the success rate in examinations is about 90%. In the examining and attesting processes Gani and Baruch see further evidence of increasing 'vocational' influence.

Nevertheless, in spite of this influence (and the inertia which it may engender) there is lively debate over the reform of social work training, in which a variety of interested bodies have expressed their alternative conceptions.

The Ministry of Public Health and Social Security, for example, would like to see the various social work schools (including those training Social Assistants) grouped together on a regional basis, under its own tutelage. A common core, based in the human sciences, could be the foundation for a variety of subsequent vocational courses. This could make for efficiency and economy, as well as apparent pedagogic rationality. Perhaps the proposal takes too little account of the intense rivalry between the various social work professions. By contrast, a study group which reported to the Secretary of State at the Ministry of Public Health in 1974 was strongly critical of the fragmentary, short-sighted, unscientific nature of the present training scheme, and felt that the situation could only be overcome by integration (or co-operation) with the university system. This scheme would also replace the present Diplômes d'Etat (under the responsibility of the Ministry) by university degrees (Maîtrises en Sciences Humaines) - thereby curtailing the authority of the Ministry of Health.

The Ministry of Education, for its part, proposed in 1968 the creation of 'Social Career' departments in the Instituts Universitaires de Technologie (IUTs). It was suggested that a 3-year IUT course could have a common element permitting inter-social professional mobility, as well as a component specific to each. They would be both professional and of university standard; theoretical and practical. The end result would be a Diplôme Universitaire de Technologie (Carrières Sociales). Teaching would be half by full-time academic staff, half by professionals. Very little has happened since. Only a part of one of the least professionalised categories of social worker (animateurs socio-culturels) are now training to any degree in the IUTs, and only one of the pre-existing Schools of Social Service has been integrated with an IUT (at Grenoble) - despite (according to Gani and Baruch) "l'hostilité sourde du Ministère de la Santé".

The Comité d'Entente des Ecoles Françaises de Service Social (which represents the Schools, and is made up of representatives of their staffs) has made proposals in which the current role of the schools is largely maintained.

Finally, the relevant professional bodies(e.g. ANASS) and trades unions(e.g. CGT, FO) consider that there is great need for a much more open and flexible training procedure, which to a large degree would avoid narrow specialisation. This would have to be offered within the framework of the university. The first 2-year cycle would consist largely of theoretical instruction in the social sciences with an absolutely minimal vocational component. The second 2-year cycle, which would include a large place for 'stages', would be more specialised and professional. It would lead to the Diplôme d'Etat. It would then be perfectly possible for the graduate to proceed to third cycle (doctoral) studies.

Thus not only are the ministries in apparent disagreement over the desirability of incorporating social work education in a university framework, but the professions themselves (and the organisations which represent them) are also divided. Reform remains on the agenda.

Germany

Germany provides an example of social work training institutionalised in a form mid-way between the vocational independence/differentiation of France and the integration found in Britain. There has been a gradual up-grading and integration of social work schools which has not, however, given them university status (with the exception of those integrated into Gesamthochschulen). There has also been a gradual shift from private to public sponsoring of the training schools.

Two major reforms are distinguished by Weingart and Schmitz, both of which are interpreted in terms of increasing 'professionalisation'. That of 1959 saw the upgrading of the schools to the status of "Höhere Fachschulen"; an extension of the course leading to the state certificate from 2 years to 3; some integration between training leading to specialisation in what had been different social work occupations; and an attempt to increase the pedagogic character of the occupational practice part of the course.

The second reform began in 1968, as part of the general reorganisation of "Fachhochschulen". "Most important, social work was granted 'Hochschul' status ... and ... for the first time was given the chance to create a scientific foundation for its operation".

The length of studies has also been increased (to 3 years academic instruction plus 1 year of practical work).

The Role and Status of the Social Worker

The controversy which appears to surround the 'proper' training of social workers (and which is made very clear by the French case study) seems to derive from a variety of factors. Among these the historical legacy and current professional aspirations of the occupation,

or occupations, are obviously important. So too are general educational debates over the 'proper' organisation of short cycle vocational post-secondary education (1). But the fact that social workers themselves are deeply divided and uncertain as to their role and their responsibilities strongly affects the training controversy and the training institutions.

Though the protection of historical occupational differentiations further complicates the French scene, the uncertainty, the dissatisfaction, even 'crisis', seems to be very similar in each of the countries. Roughly speaking, one major division is between those who see the focus of the social worker's role as the disadvantaged or deprived individual, and those who see it as the social organisation producing disadvantage and deprivation. This is reflected in the rival "case work" and "community work" approaches to social work practice. The "case work" or individualist approach is well-entrenched (in the paternalist origins of social work) but Gani and Baruch quote from a study by Sérou and Dumas :

> Social workers are increasingly aware of their ineffectiveness if they do not tackle the political aspect of social problems. Conflict between the services and the social workers on this question is unavoidable (2).

It may be that an emphasis, in training, on psychology on the one hand, sociology and political economy on the other, can promote one or the other of these ideological orientations.

Also contributing to the widespread dissatisfaction of social workers is evidence quoted from studies in France and in Germany of a belief that status and professional responsibilities are in no way commensurate with the training received. That is, social workers perceive themselves to be undervalued not only by society at large, but by many of the professions with which they are in regular contact (notably medicine). This perception is particularly strong among the younger members of the profession. A German study found resentment at the perceived lack of professional influence over relevant decisions, and at the poor working conditions. French studies have shown how the 'crisis' and disaffection among practitioners are reflected in the training schools.

It ought to be possible to say something about the working of the credentialling process in social work in relation to our earlier characterisation of 'successful' credentialling. The problem is that whilst the role of the social worker is uncertain, open to 'negotiation' and to disagreement, it is very difficult. The 'proper' scale of

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1) See Short Cycle Higher Education, OECD, Paris, 1973.

2) J. Sérou and B. Dumas : "Etude comparative de deux systèmes de formation de travailleurs sociaux", mémoire dactylographié, Université René Descartes, Paris, 1973.

provision and organisation of training, the knowledge base of practice, and almost all other relevant parameters must depend upon some prior consensus as to what the social worker should do. It seems difficult to choose between experiential learning and instruction in social theory, when the objectives of training are as uncertain as they are here.

One can only wait for the outcome of interest group politics and the possible negotiation of a consensus. It should be stressed however that in the overtness of its crisis, social work is most atypical.

2. Nursing in Britain, Sweden and the USA

Like social work, and to an even higher degree, nursing is a woman's occupation: in the countries considered over 90% of nurses are women. Unlike social work, nursing as a recognised occupational role dates back well into the 19th century. At that time, however, nurses received little or no instruction: the influence of Florence Nightingale upon subsequent professionalisation in Britain is by now very well known. Through her influence, by the end of the century nearly all the larger voluntary hospitals had their own training schools. In each of the countries reviewed nursing training is given either wholly or partly in schools attached to hospitals. But we shall see that the degree of this 'attachment' varies, as does the use which is made of the general post secondary education system. In each country, too, nurses belong to various categories. In Britain hospital nurses are called State Registered Nurses (SRN), State Enrolled Nurses (SEN), and there are also nursing auxiliaries. The profession is 'closed', in the sense that members of the two former categories require state registration (licensing). The situation is similar in the United States, where Registered Nurses, Licensed Practical Nurses, and nursing aides may be distinguished. In Sweden Registered Nurses correspond to those in Britain and the USA, as do the nursing aides. The intermediate category is, however, a recent innovation made (in 1962) for special reasons. Clearly there are at least superficial similarities between the countries. And whilst the nurse's role is evolving (and certainly vis-à-vis the role of the doctor subject to both tacit and overt 'negotiation'), the 'crisis' of social work which impacted upon the previous analysis is absent.

Britain

The movement to require all nurses to have received some years of formal training dates from around 1900, the formal training requirement following the introduction of State registration (1919 Act). All newly-registered nurses would henceforth have to pass a state-wide examination set by the General Nursing Council after a three-year course of training. The Council was also required to approve training schools (in hospitals) in which all teaching was done. The first State

examination was held in 1925. The very high failure rate (40 per cent) was evidence that many hospitals admitted to training many girls who had no chance of passing - simply to obtain a pool of available labour to alleviate the severe shortage.

Through the 1930s the Royal College of Nursing pressed for a minimum level of education as a condition of admission to training: however the number of girls in secondary education was too small to permit the condition of secondary education. Educational tests were introduced by the GNC in 1937.

A major source of difficulty lay in the dual status of student nurses: they were students learning to be nurses - but they were also carrying out a substantial proportion of the actual nursing duties (they represented some 20 to 25 per cent of the total nursing force in the 1940s). To a substantial extent the hospitals in which they trained regarded them primarily as labour. An official committee reporting in 1947 (to the Ministry of Health) sought to impose the status of student, and, by making a reduction in the substantial domestic duties which student nurses had to carry out (and which could be delegated to supplementary staff) it would, it was said, be possible to reduce the training period to two years-training courses to be dictated by the needs of the student, not of the hospital; financing nurses' training would be the responsibility not of the hospital but of a new centralised training authority - to which the student-nurses would be answerable, etc. To most of this - and the other recommendations of the Committees - the leaders of the profession objected.

In 1949 a very much watered-down version of the Committee's proposals, now supported by the Royal College, was introduced. Area-Nurse-Training Committees were established, advisory to the GNC. These were to channel finance to the student nurses, but the students in all other respects would remain responsible to their hospitals. It should be pointed out that subsequent years saw a rapid expansion in the employment of ancillary staff - freeing trained and training nurses from some of their more 'domestic' chores. The situation had become much what it is now.

There are today some 700-750 approved training schools, in hospitals of very different kinds - somewhat less than in earlier years due to the grouping of smaller schools. Almost all registered nurses receive their training through one of these. Conditions (e.g. tutor/learner ratios) vary very substantially, as do wastage rates. Syllabuses are laid down, and inspection and approval continue to be made by the GNCs (and Central Midwives Board). Education consists of practical instruction given in the wards plus theoretical instruction given in classrooms and labs - although the way in which these are integrated varies from place to place. The whole training period still takes three years (1).

1) Two years for admission to the lower category of "enrolled nurse".

A recent Committee of Enquiry chaired by Professor Asa Briggs(1) sought the opinions of student nurses and others on the current training procedure. Their analysis of opinion indicates the following. There was little demand for the student status (i.e. grants rather than wages, theoretical instruction to be given in colleges, etc.) (2). However, there was substantial dissatisfaction with the extent to which pressure of work took precedence over training needs, and with the lack of relationship between practice (work in the ward) and what was taught theoretically in the nursing school.

This, however, seems to differ very much from one hospital to another, and it is perhaps the real diversity in the educational environment which is most striking.

The Committee considered the following six problems to be fundamental:

a) the ambivalent position of the nurse in training both as learner and worker;
b) determining the balance of theoretical and practical work in the learning process itself;
c) the dual role of the hospital as the provides of nursing care for patients and of education for nurses;
d) the wide range of institutions providing education and the limited viability of many of them both as educational and as social institutions;
e) the mix of entrants of very different academic abilities;
f) the timing of specialisation, and elucidating the relationship between basic nursing and specialised nursing.

Point (f) refers to the provision of specialised post-registration courses. Many hospitals have for years run advanced courses for senior nurses. But provision was patchy, unco-ordinated, and often used as no more than a device to attract staff into unpopular areas of work. A co-ordinating and advisory body was established in the late 1960s to oversee these courses. Thus even today there are some 350 post-registration courses in England and Wales. Some of these are of a high educational level designed either to develop superior skills in a current area of work or to prepare nurses for work in a new speciality. Many, however, remain no more than devices to aid recruitment, with little or no attempt to provide sound educational programmes.

Since the late 1950s at least there have been a number of experimental schemes: tentative innovations in nursing education. The establishment in recent years of a number of undergraduate programmes

1) Report of the Committee on Nursing, HMSO, Cmnd 5115, Oct., 1972.

2) Only 20 per cent wanted to learn their theoretical material in a college. The vast majority felt that it is more properly learnt in a hospital, as in the past.

must be mentioned here (1). These currently exist in five universities and a number of polytechnics. The profession is agreed on the value of attracting more graduates (in nursing or other subjects) into the field. The Royal College feels, interestingly, that graduates would have to be given as long a training as those recruited at 17. The organised profession does not favour any substantial transfer of responsibility for nursing education to the formal higher education system. In their evidence to the Briggs Committee, the RCN suggest however a dual mode (alternating 2 weeks of theory with 10 of practice in a series of modules), and a Polytechnic-based mode which would be common to nursing and other health professions and lead to a nationally recognised certificate. For trainee nurses it would be followed by clinical training.

Finally we should say a little about the recommendations of the Briggs Committee, which are currently under discussion. In many ways their proposals are in line with the views of those who have reported on other aspects of post-secondary education (e.g. James Committee). It is proposed that all entrants should take a basic 18-months' educational course, leading to an Intermediate Certificate). This would be followed by a further 18-month course, organised on a modular basis permitting the student some degree of specialisation, and leading to professional Registration. Post-registration courses must be integrated with what has gone before : "education should be regarded as a continuing process". Other recommendations stress the need for "back-to-nursing" courses for potential returners, and for greater understanding of the work of related professions (e.g. social work). Institutionally, it is suggested that education be given in 2-300 new Colleges of Nursing, administered as are other colleges of further education in tne United Kingdom, and in which it is envisaged that some research should be carried out "in order that the nursing and midwifery profession shall become more research-based". Student nurses would not, however, receive student grants but training allowances. They should also receive "reimbursement ... for the value of service given by the students as part of their courses. We emphasize that students should not consider themselves as, nor be considered as part of the ordinary labour force of the National Health Service".

The Royal College of Nursing, as the voice of the profession, accepts most of the Committee's recommendations bearing on education. Their comments upon the "Colleges of Nursing" concept show, however, their concern to maintain control of nursing training in professional hands :

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1) It is noteworthy that in defining the scope of its work, the Robbins Committee expressly excluded nursing education as not being within the term 'higher education'.

"The RCN is concerned at any narrow interpretation which may be given to the reference to 'Colleges' ... a widespread building programme throughout the country would not be necessary, since a College is not itself deperdent on buildings and comprises a total learning environment - a physical concept rather than a physical entity. The College would take advantage of all clinical resources available, including those of small hospitals"(1).

Two final aspects of nursing education in Britain should be mentioned: changing numbers and minimum educational requirements for admission.

The numbers completing nursing training in recent years have shown a slight decline (21,600 in 1960, 18,800 in 1969). The reasons for this may include some loss of interest among girls in a nursing career, although the very high drop-out from the course (about 30% drop out over the 3-year course) must also contribute.

In distinction to most other occupations under consideration, there has been no attempt to raise formal minimum educational requirements for admission to nursing training. The General Nursing Council does itself set an aptitude test, but individual hospitals set their own standards. Two GCE 'O' level passes constitute an acceptable alternative. In practice, the average school attainment has been rising, but not rapidly. In 1969-70 58% of entrants had 3 or more 'O' level passes. Only 10% had any passes at 'A' level, and only 4-5% the 2 'A' levels necessary for university entrance.

Sweden

The apprenticeship method of training nurses which plays a major role in Britain (and has long been the target of reform proposals) was abandoned by Sweden in 1965. Trainee nurses are thus no longer part of the hospital work force. The correlate of this at the institutional level is that the 39 Schools of Nursing are independent of the hospitals.

The Schools of Nursing are administered regionally (by County Councils) subject to the Vocational Schools sector of the National Board of Education. All schools are run in the same way, with the same syllabus. Their staffs have post-registration qualifications in teaching, are employed by the schools, and may draw upon the facilities of more than one hospital.

The course leading to State Registration lasts for 2 $\frac{1}{2}$ years. After a subsequent 6 months of general experience, the nurse is eligible for a variety of advanced courses, leading to specialisation in e.g. midwifery, operating theatre care, etc. These courses last for one year. It is important to note that their graduates, specialist

1) RCN Comment on the Report of the Committee on Nursing, London, February, 1973.

nurses, undertake many of the diagnostic/treatment tasks carried out in most other countries by doctors. (This movement of nurses into technical areas of medicine has been attributed to the shortage of doctors, but the redefinition of the nurse's role which it implies is now generally accepted).

Advanced nursing education is also available in administration and teaching for experienced nurses with secondary school qualifications equivalent to university entrance.

In fact the initial educational qualifications of those admitted to nursing training are quite high, and about 30% are eligible for admission to universities (very much higher than in Britain).

The tendency in Sweden has been to integrate nurses' training increasingly with specialist training for a variety of para-medical and medical technician occupations. Twenty schools of nursing are now housed in combined schools, where up to 50 courses may be offered. The U68 proposals will, of course, further integrate this vocational post secondary education with the university sector. In addition not only are more part time courses being offered, but there is an increasing emphasis on continuing education of a professional (as well as general) kind. As mentioned above, this kind of specialisation can lead to work overlapping in some respects with the traditional role of the doctor.

Finally, we should refer to the introduction, in 1962, of a training scheme for 'practical nurses' (i.e. the grade now intermediate between registered nurses and the untrained auxiliaries). These practical courses last for 32 weeks, or for 23 weeks if the student has at least one year's experience as a nursing aide. Unlike trainee registered nurses, these trainees are actually employed on the wards during training. It is also important to note that not only does practical experience reduce this training period, but successful completion of this course can count towards further training to registered nurse level. Thus, qualified practical nurses, with good prior educational qualifications, can take a 1 $\frac{1}{2}$ year training course to become registered nurses. This is found to be attractive to older and married women.

United States

Nursing practice is regulated by law on a State basis, as is medical practice in the USA, generally under the aegis of a State Board of Nursing. A training programme must be approved by such an authority in order for its graduates to be licensed by the State. Accreditation of institutions at the national level, which is voluntary, is offered by the National League for Nursing.

There are three distinct routes to the senior grade of registered nurse in the USA, for all of which graduation from high school is required:

i) a three-year hospital-based diploma course. The professional nursing schools are usually under the control of a hospital, but in some cases are independently incorporated.

ii) a two-year Associate Degree course in a Community College.

iii) a four-year university course which leads both to registration and the Bachelor of Nursing degree.

The relative numerical importance of these three routes in 1971-2 was as follows :

	Entrants %	Graduates %
Diploma	31.7	41
Associate degree	39.2	38
Bachelor's degree	29	21
	100	100

There are also about 1,250 approved one-year courses to train women and (increasingly) men to undertake more routine nursing care as licensed practical nurses. Admission requirements vary substantially from State to State (ranging from a minimum of 2 years' high school to high school graduation), generally being fixed as a means of regulating demand.

In general American nursing seems currently to be benefiting from the popularity of more vocational post-secondary education. The number of potential recruits (applicants) is rising. This is resulting on the one hand in a growth of associate degree programmes (in particular - but compensated by a decline in hospital-based diploma courses), and on the other in growing selectivity. This increased selectivity largely takes the form of rising admission requirements.

American nursing is highly stratified, and it is not easy to transfer from one grade (e.g. practical nurse) to the higher one (registered nurse). In general, no credit is given for practical experience, or any training, at the lower level.

Even within the registered nurse category, similar stratification exists, depending upon the route by which registration was achieved. Those who received their education in nursing schools are "victimised by basic preparation". Despite their three-year nursing education, upward mobility in the occupation is frequently blocked unless they can obtain their baccalaureate. And for those trained wholly by nursing personnel in hospital schools this requires a full four-year undergraduate course, with no credit given for experience and earlier training. The 2-year Associate Degree courses do generally attract some credits towards the full degree. In fact, 10.6 % of all admissions to associate degree programmes are licensed practical nurses.

The formal occupational associations in the United States have put considerable emphasis on the development of 'prestige' credentials -

e.g. Masters and doctoral programmes - rather than upon the expansion of basic nursing care. Indeed enrolments for Masters' degrees in nursing have expanded by 56% in 3 years.

By curious contrast, a number of universities have taken the opposite view. Thus Stanford University closed its nursing degree programme, because it was felt that this "had too little effect on health care delivery systems". In its place they instituted a two-year programme for medical assistants (who are not nurses and who generally work in general practices, in either administrative or clinical capacities. They can be certified by the American Association of Medical Assistants).

Alternative credentialling systems

We are now in a position to summarize and contrast the nursing-training systems of the three countries, and to elucidate some of the implications of each.

In Britain the system has changed little. With the exception of what is still a numerically very insignificant contribution of the formal higher education system (via Bachelor of Nursing degrees), almost all registered nurses are trained in schools attached to hospitals. The standard of training during the three year course seems to vary enormously between the 700+ such schools, in spite of central inspection procedures. Training is essentially of the nature of an apprenticeship, student nurses still being regarded to a large extent as part of the hospital work force. The Briggs Committee found much dissatisfaction with the extent to which pressure of work took precedence over training needs, and was highly critical of this arrangement. Its proposals were for Colleges of Nursing organised like other colleges of further education, and with an initial strictly educational component. The organised profession has opposed what it saw as a reduction in its own influence over nurses' training. In spite of the fact that admission requirements, and actual prior educational qualifications when compared to university entrance requirements are very much lower than in Sweden or the USA, numbers completing training are falling.

In Sweden nurse training has been organised for the past 10 years rather along the lines recommended (but opposed by the profession) in Britain. (The 3-year 'apprenticeship' scheme was replaced by a more formal 2 $\frac{1}{2}$ -year scheme in 1965). In spite of the higher admission standards, the shortfall in production (2.9%) seems to be lower than in Britain. There seems to be much more scope for advancement, not only into administrative roles (as in Britain) but into professional roles overlapping the traditional role of the doctor, and based on subsequent specialisation. Further integration with other post-secondary education is likely as a result of U68 proposals. (In Britain the Robbins Committee did not consider nursing education to be within its remit).

In the USA a 3-year hospital school based route to Registration co-exists with one through the formal and general higher education system. The former seems rather like that found in Sweden, and the trainees have student status. (Thus they receive educational loans, not salaries). The latter route, including 4-year bachelor and 2-year associate degree programmes, accounts for nearly 60% of all registered nurses trained. Yet this dual access system seems to possess many of the disadvantages of 'credentialism'. First, there is a status hierarchy based upon mode of access, in which university graduates are favoured. Advancement may depend upon possession of the Bachelor's degree, irrespective of subsequent experience. Second, there is a growth of university postgraduate programmes in nursing, supported by the relevant professional bodies.

The British and American cases seem in some senses to present opposing pathologies : each, interestingly, being supported by the organized profession. The apparent similarity of the Swedish case with the proposals of the Briggs Committee in Britain is also noteworthy.

3. Accountancy in Britain, Sweden, and the USA

The responsibilities of accountants are to some extent circumscribed and defined by law in all three countries, at least insofar as they relate to the traditional activities of the profession. By this we mean the auditing of the accounts of public companies as well as duties connected with the issuance of share prospectuses. In Britain these activities are reserved, under the Companies Acts, to Chartered and Certified Accountants (i.e. members of these professional bodies). In practice, accountants are now found in an enormous range of managerial, public finance, and business positions. The situation is partially reflected in the proliferation of professional bodies (which have resisted suggestions that they merge). In Sweden, similarly, the auditing of accounts of public companies (over a certain size) is reserved to authorised public accountants. But additionally, under Swedish company law, the auditor is required to report to stockholders on the administration of company affairs by the Board. This legal responsibility to shareholders (the public ?) is in contrast to the divided loyalties (Board - v - shareholders) which, according to the classical account of Carr-Saunders and Wilson (1), may beset the British auditor. Moreover, the Swedish Authorised Public Accountant (APA), in contrast to his British colleague, may not hold a salaried position in a public or private company without his authorisation (from the State) being revoked. In Britain, some 40% of Chartered Accountants are thus employed.

Legal constraints are slighter in the USA, and there is no

1) A.M. Carr-Saunders and Wilson : The Professions, OUP, London, 1933, p. 221.

equivalent Federal Companies Act. State laws do not generally require public companies to appoint independent auditors (though this is usual) or to furnish stockholders with audited financial statements. The Federal Securities Act (1933) does require certain types of company to have audited statements, and requires also that companies offering securities for public sale in more than one State, and for more than a certain minimum value, file independently-audited financial statements.

The legal and ethical constraints vary. However, the tasks of the accountant have evolved very considerably in the years since the major professional associations were founded, around the beginning of the century. New categories of accountant have come into being, largely in response to the growing complexity of financial, commercial, and industrial activity. In making the comparisons below it is rather difficult to be certain that, in terms of tasks, roles, responsibilities, like is being compared with like. Broadly speaking, however, the credentialling processes for Chartered (UK), Authorised (Sweden) and Certified (USA) Accountants are as follows.

Britain

Since the Institute of Chartered Accountants in England and Wales is much the largest, the second oldest, and with the Scottish and Irish Institutes the most prestigious of the accountancy bodies, and since educational requirements of the various bodies have long been converging, we shall concentrate here upon the educational and examination procedures leading to membership of this Institute. To be a Chartered Accountant is to be a member of the Institute, and membership is the crucial credential.

Since the establishment of the Institute in 1880 accountancy training has been largely 'on the job'. In order to attain membership it was necessary to serve a five-year apprenticeship ('articles') with a member of the Institute in public practice, and to pass the Institute's examinations (which fall into three parts : Intermediate, Final Part I, Final Part II). Some formal instruction is usually required by the trainees during their five-year apprenticeship. This has never been provided by the Institute but, traditionally, by private 'cramming' establishments on a correspondence basis (a situation which has changed somewhat in recent years - see below). Prior to the 1940s there was no institutionalised contact with the formal higher education system. In 1944 a Joint Committee of the Universities and the Accountants' Professional Bodies issued a Report recommending the institution of degree courses, based largely on economics, law and accountancy, designed to offer the intending accountant "a liberal education and an intellectual discipline". These degrees are today offered by a number of universities, and latterly also by polytechnics (under the aegis of CNAA). The receipt of such a degree has, since 1944, allowed training to be reduced

from five years to three (as with any university degree) and exemption from the Intermediate level examination of the ICA.

For some 25 years the situation changed little, and reports issued in the interim by the Institute indicate a very slow evolution in attitude to education and training. In 1951 the view was expressed that no further integration of accountancy studies with the formal education system was appropriate.

> "Whatever 'oral tuition' may be required is by way of supplement to, and not in substitution for, practical training. Such oral assistance can be given effectively only by members experienced in practice ... the articled clerk's contact with his principal and the seniors on his staff ... will prove of much greater importance than lectures designed merely to replace existing correspondence courses ... The Council (of the ICA) has no reason to believe that the present facilities for correspondence tuition are inadequate or unsatisfactory"(1).

Members of the Institute were, however, recommended to allow trainees a certain number of weeks' paid study leave in which to prepare for examinations.

A subsequent Report, published by the Institute in 1961, expressed continuing faith in training based wholly on apprenticeship (i.e. 'articles'). Moreover, the trainee was not to regard himself simply as 'being educated': he" ... must be prepared ... to provide real assistance ... to give as well as to receive and to do so in a manner which will earn his keep".

A survey carried out by a number of university appointments officers in 1965 gives some idea of the nature of the apprenticeship

> "Articled service, whatever its original intention, consists largely of straightforward work, under relatively little guidance from the principal, combined with impersonal external tuition provided by correspondence courses, with non-existent integration between the two parts, and with a large part of the articled clerk's work directly productive for the firm. Such training as exists is oriented around the requirements of the firm. The Institute should re-examine the effectiveness of the system, and its purpose (other than the passing of the professional examinations)" (2).

But the 1961 Report did not recommend any changes relating to the relationship between accountancy training and formal education (even though the need for a higher graduate intake into the profession was

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1) Quoted in M. Bourn: "Professional Examinations in Accountancy", SRHE, 1968, p.78.

2) Ibid.

by then accepted). Any change in modes of instruction would have to be very gradual.

> "Accounting practice has developed substantially since 1945. But the lack of an extensive academic and research tradition has made change very uneven; new methods spread relatively slowly. This is reflected in the examinations of the professional bodies ..." (1).

In the last few years some important changes have in fact been made, deriving in part from the failure of the attempt to merge the various professional accountancy bodies. They involve the need for a period of pre-professional education, and a raising of the standards of the professional examinations. In 1966 the (then voluntary) Foundation course was introduced, and today all non-graduates have to attend such a course. These full-time courses are provided largely in polytechnics (and almost all polytechnics offer them). The courses are intended to provide a pre-professional educational foundation in some depth in a range of subjects basic to the study of accountancy, as well as some technical competence in subjects of most direct relevance to accountancy practice. Colleges are allowed substantial freedom in planning these courses (although curricula are approved by the Institute), and they themselves examine the students. On passing the examination the student will normally enter into four years of what is no longer called 'articles' but now a 'training contract'. In other words these College examinations give exemption from the ICA's own Foundation Examination. Special provision is made for holders of university or CNAA degrees. Depending upon the subject(s) in which an individual has qualified he may be granted an exemption from all or part of the Foundation Examination. So for many graduates (probably half) further pre-professional study will be required early in their years of training (either by correspondence tuition or, when these become available, by attending special conversion courses).

The intending accountant then embarks upon his professional training: three years' work in an accountant's office for the graduate, four years for the non-graduate, during which time he is allowed 26 weeks' study leave. In the past two to three years, at least, a good deal of thought has been given to improving the educational quality of this training. The ICA is trying to stimulate the provision of specially designed and approved short courses which trainees would take; to guide principals in how to train their students; and the initiation of an (eventually mandatory) Training Record. The ICA has gradually accepted its responsibility to ensure that "a student obtains adequate training and responsibility". The student thus prepares himself, either

1) Bourn: op. cit.

by taking courses, or by the traditional correspondence method, for a new two-part Professional examination, of which the standard has been gradually raised. Part I may not be taken until after one year's practical service, Part II at least one year after passing Part I (1). The Examinations set by the Institute lead to Associateship. Other changes now being introduced are post-qualification tests in specialist areas (which will become the only way to be admitted to the senior grade or fellowship of the Institute); the need for two years' post-qualifying experience before being allowed a certificate to set up in practice; and a new class of "accounting technicians".

We should refer finally to the question of educational requirements for admission to accountancy training. In 1971 the minimum school-leaving standard was raised from 6 GCE 'O' level passes to 2 'A' level + 3 'O' level passes (or 3 'A' level + 1 'O' level) - that is, to the minimum required for university admission. In practice, an increasing proportion of those entering training are already university graduates: 10 % of all entrants in 1966 rising to 27 % in 1971 and 36 % in 1973. This figure is expected to exceed 50 % by 1976. It is explicit Institute policy ultimately to achieve a wholly graduate intake, and thereby both to raise the status of the profession and to ensure a supply of capable trainees.

Sweden

The Swedish professional body for the senior grade of accountants (The Association for Authorized Professional Accountants) has none of the credentialling powers of its UK equivalent. Authorisation to practise as a public accountant, which as indicated entails very many ethico-legal constraints and responsibilities, is granted by the State (through the Royal Board of Trade). Moreover, academic education corresponding to that of the accountant (accounting, finance, economics, business law) was offered by the Stockholm School of Economics by 1909 whereas the professional association was not founded until 1923.

There is no special professional examination. Authorisation is granted to men and women (but very few of these latter) who have (1) graduated in economics/commerce from a Swedish university or school of economics (and with certain minimum grades) and (2) are professionally engaged in the field of auditing and have been so engaged for at least 5 years (of which at least 3 with an independent authorised public accountant). Authorisation is granted on fulfilment of these criteria, and on filing a declaration of good moral character. It is also possible to obtain authorisation without the academic degree by passing an examination in the same subjects set specially by university professors. But this route is rarely followed.

1) The Institute is also beginning to consider the partial replacement of the examination as a mode of assessment by the use of case studies, essays, interviews, etc.

United States

As in Britain, and in contrast to Sweden, professional examinations play a crucial role in certification of American accountants. Since 1917 the American Institute of Certified Public Accountants (AICPA) has set examinations, and since 1952 all States have administered a uniform AICPA examination, set and graded under the supervision of the AICPA Board of Examiners. It is this which leads to certification (1). Significantly, however, the States vary in the educational requirements necessary to take this examination. Some require only high school education, some waive educational requirements for those with practical experience, whereas in others the converse is true. Most, however, require 2-4 years' practical experience.

The requirements of the State of New York are among the most stringent. Those taking the AICPA examination must have:

1. a bachelor's or Master's degree based on an approved programme in accounting;
   or graduated from college plus the equivalent of a college training in accounting as determined by the N.Y. State Commissioner for Education;
   or 15 years' practical experience in accounting;
   as well as
2. being at least 21 years of age ;
3. having 2 years' practical experience (1 year for those with an approved degree).

In 1969 a report (Beaner Report) to the AICPA recommended that experience should no longer be a prerequisite for those who have completed 5 years of acceptable college study. The reasons given were these. Uniform standards for practical experience can neither be set nor enforced. Experience requirements imply "apprenticeship" which is inappropriate for a "learned profession". The increasing number of exemptions made imply that prior experience is of diminishing importance. Moreover, States which do not require it provide no evidence of a reduction in standards. Experience is gained after qualification in any case. In spite of the acceptance of this report by the Council of the AICPA, most States continue to demand practical experience.

There is also debate over the (quite common but not universal) degree requirement. Many argue that accountancy should become an all-graduate profession.Those holding this view argue that only by demanding an accountancy degree can the profession develop the sophisticated techniques necessary for a "unique capacity" to solve (management and

1) About 20 % of all accountants in the USA are "certified" accountants.

control) problems beyond its traditional sphere. New recruits, it is claimed, would be attracted by the rigour of the knowledge required and by the challenge of a graduate degree programme. Against this, others argue that professional schools actually fail to prepare graduates for the real world of the profession: that they "intellectualise", not "professionalise".

The present position is that almost all Certified Public Accountants are graduates in relevant subjects, and that those who have first degrees in irrelevant subjects have a Master's degree in accountancy.

Continuing education has become an important issue in American accountancy. The question has been: ought continuing study to be demanded for re-certification? One branch of accountancy has made it so. The Institute of Management Accountancy (founded in 1971), which offers a Certificate in Management Accountancy (which is open to graduate CPAs or those obtaining a satisfactory score in a special test) demands an average of 30 hours' professional study per year in each three-year period. In 1971 the Council of the AICPA asked States to institute the requirement that CPAs demonstrate continuance in professional education as a condition of renewal of certification. This would demand 20 hours or 15 days of acceptable continuing education during a three-year period. By mid-1973, ten States had introduced such a regulation.

Alternative credentialling systems

The British system of certification is characterised by considerable professional self control - power which was for long used to inhibit any innovation or "intellectualisation", and in defence of the traditional apprenticeship mode. In recent years significant changes have been made, although 3-4 years' practical training (for graduate/non-graduate respectively) are essential before the final professional examination of the ICA may be taken. The changes have entailed raising the minimum secondary-school leaving level to that of university entrance, as well as a full time Foundation course (based in polytechnics) for all non-graduates (or graduates in non-relevant subjects) seeking membership. The Institute is trying to ensure that (ultimately) all entrants to professional training will be graduates. Continuing education is not seen as desirably mandatory, although specialist examinations will lead to the higher grades of membership in the Institute.

In Sweden the profession is controlled by the State, which imposes much more rigid ethico-legal constraints and responsibilities than is usual in a situation of professional self-control. Access to the profession depends solely upon a relevant university degree, followed by 5 years of practice: no attempt is made to monitor or assess the extent of 'on-the-job learning'. This situation is the diametric opposite of the traditional British apprenticeship scheme. The difference may

be understood if professional examinations (as in Britain and the United States) are seen as an aspect of the manifestation of occupational self-control. "Professionalising" occupations (as the term may be understood in Britain) seek (almost by definition) to control the scale and standard of entrance, which cannot be left to the university system.

The American situation has similarities with both the British and Swedish cases. Thus, professional examinations (that is, set and graded by the occupational association) are an essential hurdle, as in Britain. As in Sweden, a relevant degree is commonly (though not universally) required, though here as a pre-condition for taking this examination. In practice most do have such a degree. There is disagreement within accountancy as to whether a relevant degree (bachelor's or master's) should be required of all entrants; also as to whether (as in some but not all States) some prior practical experience (as in Britain) should be required. Continuing education as a condition of re-registration is a unique issue in the USA.

In all three countries passage through the formal higher education system either is, or is likely to become, essential for the intending accountant. But the rationale differs. In Sweden and the USA, where what is required, or may soon be required, is a relevant degree, the implication is that much or all of the relevant training will be given by the academic system. In Britain the degree equivalent seems rather the attempt to obtain occupational status and high quality recruits. The implications of their requirement for the openness/accessibility of the occupation obviously depend upon the accessibility of higher education: in a situation of limited access (such as characterises most European countries vis-à-vis the USA) it may be seen as a restrictive measure.

The American debate over the need for some years of practical experience has rather different implications. The protagonists seem to be those who equate "experience" with "apprenticeship" (which they reject) and, on the other hand, those who equate training given wholly within the academic system with "over-intellectualisation" or "impracticality". It is hard to escape the conclusion that those taking the former view are concerned mainly with occupational status rather than quality of the service offered.

4. The Influence of Common Knowledge and Task Structure on Credentialling.

In this section we have attempted some cross-national comparisons of the credentialling process in three rather different occupations. The intention was to see whether such comparisons demonstrated (a) common features or trends; (b) common failings or pathologies of credentialling.

In the case of social work we found rather similar debates in France and Germany over whether or not the specialist social work schools should be more closely integrated with the higher education system. The French case study showed how the occupation itself, as well as other interested bodies, were divided on this. In Britain where, by contrast, social workers have never been trained in special schools (most having been, and being, untrained) there is no such debate. When training is given it is within the formal post secondary education system. Much of the debate in France derives from the attempts of various related social work occupations, largely unified in Britain and Germany, to protect their independence. However there is no doubt that the major factor, source not only of educational debate but of real crisis, is the uncertainty in all 3 countries as to the proper occupational role of the social worker. Until this is resolved, if it ever can be, except by a fiat, it is difficult to take any objective view of social work credentialling.

In nursing, this role crisis does not exist (although there has been a slow evolution in role, combined with some strictly hierarchic differentiation). Consequently, perhaps, we found greater comparability between the national training schemes. In Britain the occupation has jealously guarded a traditional apprenticeship mode of training based upon many small and very heterogeneous training establishments within hospitals. Many of the worst features of apprenticeship are retained: hard work with little education, high drop-out rate, etc. At the same time, even though minimum entry qualifications have been kept very low, there are great shortages. A few small scale undergraduate programmes in nursing have been introduced within the formal education system, but making a very small contribution in terms of numbers. In a sense this is the most primitive scheme of nursing training: those found in the other two countries examined (Sweden and the USA) may be seen as two rather different developments from this primitive root. In Sweden, which abandoned apprenticeship training 10 years ago, the nursing training schools have been made independent of the hospitals, their trainees given student status. There is an increasing tendency to combine nurses' training institutions with those of other (especially para-medical) occupations. There is an emphasis on post-qualification specialised training leading on to higher status work (which can be of a diagnostic/medical, administrative, or educational nature). The Swedish example is much what has been recommended by an advisory committee in Britain. Yet it must be remembered that admission standards are very much higher in Sweden: 30 % of those admitted could have gone to university (c.f. about 4 % in Britain).

American nursing education is a different kind of development of the British practice in which a hospital-based scheme co-exists with schemes based in universities and community colleges. This situation seems to

produce a hierarchy in which mode of access to a common grade can determine possible future advancement. We seem to have an almost classic case of "credentialism", as university programmes (including graduate programmes) blossom with the status-seeking support of the organised profession.

In accountancy the same three countries do not display quite the same appearance of evolutionary logic. Accountancy differs from nursing (and social work) in that in Britain and the USA (though not in Sweden) there is a high degree of self-government. British accountancy has emerged from its traditional apprenticeship scheme by imposing the requirement of some formal training (within polytechnics) on all those without a relevant degree. But perhaps the more significant changes have been restrictive: minimum entry qualifications raised to those for university entrance, and a deliberate policy of creating an all-graduate profession."Apprenticeship" of 3-4 years leading to professional examinations is still crucial. The American profession, as in so many other areas, can rely upon a responsive university system to provide vocational degree programmes. A relevant bachelor's or Master's degree may be soon a sine qua non for the accountant in all American states. Clearly this is a less restrictive criterion than it would be in Europe. If the need for some practical experience before taking final professional exams is abolished,this places too heavy a burden for training on the academic authorities. In Sweden there is no professional training or examination: a correlate, perhaps, of State (rather than occupational) control. Only in America is there concern with continuing education and re-certification.

Whilst debate over the proper organisation of training, and particularly the extent to which recourse should be had to the formal post secondary education system, is common to all the occupations, it is clear that this debate has different motivations and different rationales. Thus, in social work and nursing, questions of occupational status, of the pedagogic value of training offered, and of occupational control all underlie the debate. In almost all cases, and irrespective of whether training is given in universities, in special colleges, or 'on the job', the qualifications necessary for admission tend to approximate those necessary for admission to university ('A' levels, Baccalauréat, Abitur, etc.). The obvious exception is nurses' training in Britain. But whereas this may sometimes be attributed to occupational status-seeking (e.g. accountancy in Britain), in other cases it is simply the result of competitive pressure for places (e.g. social work in France).

It seems that the three examples show little evidence of internal homogeneity or of common 'pathology': there is little evidence for the determinate influence of common knowledge and task structures upon the learning/credentialling process. Nationally specific factors are

of obvious importance. Amongst these we may note: State and occupational self-determination (distribution of power): the receptivity of the university system to socially-demanded vocational training; social perceptions of the desirability of different occupations, etc. The next section of the paper, therefore, takes up briefly some of the issues emerging from the national case-studies: that is, across occupations and within countries. (In a way, this is a rough attempt to hold political and academic values/structure constant, rather than knowledge/task structure as in Section V).

VI. COMMON POLITICAL AND ACADEMIC STRUCTURES AND VALUES

Professional associations in Britain have existed in many fields since the nineteenth century: amongst the occupations studied this is true of accountancy, architecture, engineering, and nursing. In each case they have been active in promoting the status of the occupation. In teaching, by contrast, the pre-eminent occupational association is better classed as a trade union (though this is only an ideal-typical distinction). Professional associations in Britain often functioned, traditionally, as "qualifying associations" (1). In practice, this tended to mean examining bodies. The lack of formal vocational instruction meant that 19th century training in, for example, accountancy, architecture, engineering, was almost entirely 'on the job'. To assess and guarantee competence - a task which obviously could not be performed by the educational system - the professional bodies instituted systems of examinations for those who wished to join: e.g. architects 1882, civil engineers 1847. Apprenticeship is the traditional mode of occupational training in Britain. Formal instruction and examinations conducted by academic institutions (generally subject to the approval of the professional body) appeared rather later. Thus, the architects' association (RIBA) established its Board of Architectural Education, to ensure comparability between courses offered in different places (and subsequently to approve these courses) in 1904. Even in teaching, the first teacher-training establishments recruited their trainees only from among apprentice (or pupil) teachers. Within the older professions which have always 'regulated' themselves, the examinations of the professional bodies retain their importance. Subsequent developments in some fields (notably architecture, engineering) have particularly involved the approval of certain university and college courses as permitting 'exemption' from part or all of these examinations. Teaching, in which the State has exercised a dominant role (as an increasingly

1) G. Millerson: The Qualifying Associations, London, Routledge, 1957.

monopolist employer) is quite different in this respect. The State has always determined the qualifications necessary for teaching-employment in a State school, and this has been done in terms of the degrees or diplomas awarded by Universities (including Departments of Education) and Colleges of Education.

Thus, occupational training in Britain may be largely characterised in terms of the gradual adaptation of the traditional apprenticeship mode to the pedagogic and status-attaining implications of evolving post-secondary education. Occupational training thus tends to consist of a mixture of theoretical study and practical training, though these are integrated in a variety of ways :

TIME

1)	Long period of formal higher education (pre-professional)	→ Practical instruction 'on the job'	→ Professional examination
2)	Short period of formal higher education	→ Practical instruction 'on the job'	→ Professional examination
3)	Long period of formal education with periods of practical work (college based)	→	Professional examination
4)		Practical instruction 'on the job' with periods of theoretical instruction (work based)	→ Professional examination

Architecture and engineering represent Form 1) - at least the majority of entrants to these professions pass through such a process. Accountancy, since 1966, has been of form 2); teaching of form 3). Nursing represents form 4). It is worth pointing out that 4) is the traditional mode in many occupations: accountancy worked in this way until 1966, whilst in architecture and engineering it still exists as an alternative mode of access (to be phased out by the architects). Under the proposals of the James Committee, teaching would tend towards a 5th mode: a period of pre-professional higher education, followed by a similar period of education involving practical work. The professional examinations are set by various kinds of bodies: professional associations alone (e.g. architecture, accountancy): official bodies (nursing, social work), colleges under the surveillance of designated bodies (teaching).

Just as the organisation of learning differs from one occupation to another (and there is no convergent tendency towards a common mode), so the arrangements made for 'exemption' from professional examinations for graduates also differ. In architecture and engineering exemptions

are possible: the formal higher education system has for some years been assuming a greater share of control over the education/training process. Admittedly, in architecture the professional body maintains a formal surveillance over the work of the academic departments and over the quality of practical training. There is also considerable interest in possible ways of assessing the quality of practical training. All of this is much in advance of the other fields. In accountancy, nursing and teaching (leading to posts in State schools) no exemption from professional examinations is possible. However, in accountancy and teaching (and in social work for those who choose to become formally qualified) a degree does lead to a reduction in the formal instruction preceding the professional examination. Thus, in education, the trainee teacher who has a degree is required to take a one-year course, in place of the three or four-year course for the school leaver. In accountancy partial or full exemption from the foundation course is possible. In nursing training, relationships with the formal higher education system are scarcely developed: training is wholly 'on the job' and hospital based, and there is no agreement as to the exemptions to be granted the graduate entrant.

We may therefore conclude that, whilst there is an undoubted tendency towards the integration of professional training with higher education, the extent to which the burden of responsibility is being passed to the educational institutions is likely to differ from one occupation to another for the foreseeable future. So too is the extent to which alternative modes of access for those who do not gain (or wish) admission to higher educational institutions are retained.

Teaching is unique amongst these examples in that formal education/training may be obtained either in the university or in specialised colleges of education. (Thus, in 1971, 9,000 graduates began university postgraduate teaching diploma courses, whilst 38,000 students embarked on courses in colleges of education) (1). This duality parallels that noted in American nursing. Our conclusion there was that it had led to an (unofficial) stratification, in which advancement tended to be open only to graduates. The teaching example tends to confirm this hypothesis as to the implications of this dual mode. (In fact government policy in Britain aims ultimately to make teaching an all-graduate occupation).

We should finally refer to the scale of access and recruitment. The six occupations have differed substantially in terms of growth rates over the past few years. The rate of growth in new students or practitioners ranged from 9 to 11 per cent (accountancy, social work) through 5 to 6 per cent (engineering, teaching) down to zero in architecture and -4 per cent (nursing). The factors determining these figures seem

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1) Of whom about 40 % possessed the 2 'A' levels demanded, as a minimum, by the universities.

also to differ from one case to the next, not strictly corresponding to what is implied by the 'locus of formal control' diagram introduced at the beginning of this chapter. Thus, the high growth rate in accountancy is clearly an expression of growing interest on the part of intending students (to which both formal and informal training arrangements have responded). In engineering, where formal provision of places has tended to outstrip student demand, the latter seems again to have been rate-controlling. In architecture, though the professional body can exercise considerable control, responsibility for the selection of students has been very largely delegated to (approved) academic institutions. The zero growth rate is not attributable to lack of student demand (demand for places is high) but to lack of growth in number of places. Though government policy (towards the funding of higher education) must have been relevant, it seems that the academic institutions themselves have largely determined the (non-) expansion of the architectural profession. In teaching, government control has been most important, and currently aims at a reduction in the numbers of teachers being trained, in the face of fierce opposition from the profession. The situation in nursing and social work is hard to assess, in view of the extremely high drop-out from training in the first case and the recent reorganisation combined with the high proportion of unqualified practitioners in the second.

There is clearly little general evidence of occupational attempts at restricting the supply of services (i.e. scale of training) in order to maintain elite status and financial rewards. In the State-controlled occupations, the associations have fought vigorously for expansion (social work, teaching). Similarly engineers and scientists, (who equally are unable to determine their own rates of remuneration) have expressed an expansionist ideology. But doubts on this score must still surround the most traditional professions able to fix their own fees. Architecture, the only example in our sample, does after all show a lack of growth; (although it is difficult to assess the societal implications of a restriction upon architectural services).

Support for the view that the most 'traditional', most 'autonomous' professions do consciously restrict entry is provided by Gani and Baruch's study of the legal profession in France. To be sure, enrolments in French faculties of law have been growing rapidly, but this is not a professional education. The French bar, like its counterparts elsewhere, jealously guards the right to determine who shall become a barrister (avocat). This is done via a separate professional examination, the CAPA:

> "On the whole the barristers (who supervise the CAPA) use it as a means of checking the flow. It is in short an elimination system ..... the results are usually known in advance. Last year

(1974) there were, I think 1200 to 1300 candidates in Paris. It was known at the outset that 400 would pass and the rest would be failed because it was estimated, rightly or wrongly, that the Paris area could not absorb more than 400-500 barristers"(1).

As the numbers graduating in law from the universities have expanded, these tests have been made more and more stringent.

In Germany professional associations have historically had a much more limited influence than in Britain (and the USA). The general picture which emerges (from an admittedly very different set of examples) is quite different from that of Britain (which was characterised above as the gradual adaptation of a traditional apprenticeship scheme in response to developments in the formal educational system).

Consider the two occupations treated in the case study which are most strongly 'organised' (in occupational associations) and thus correspond most closely with the British example: social work and engineering. In each case education/training has historically been given in specialised schools (though their 'histories' are of very different duration). The three characteristics of change in both cases seem to be: upgrading of the training institutions (to correspond increasingly with the universities); upgrading of entry qualifications (to correspond increasingly with the universities' "Abitur" requirement); and expansion of places. For social work these changes have already been described. As an occupation largely in public employment, it has been the State(s) (both employers and suppliers of education) which have been principally responsible for change.

The longer history of engineering is more complicated. Engineering training was at first given in local technical colleges of a very practically-oriented kind. Through the latter half of the 19th century, and in spite of university opposition, these became integrated with the university system (as Technische Hochschulen). But this upgrading was achieved at the price of an increasingly theoretical education and an entry qualification which now became that of the university. The Association of German Engineers (VDI) and industrial employers, acting together (as they have often done), reacted by helping to establish a second, more practical scheme of training at the end of the 19th century. This, offered by what became the Ingenieurschulen, required a much lower prior entry qualification, and included a large practical experience course component. Their activities were generally marked by strong industrial control and orientation. Little changed until the 1950s.

Though the graduates of the engineering school (graduate engineers) had been trained according to the apparent needs of industry, and though

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1) Gani and Baruch, op. cit., p.114.

they frequently carried out the same sorts of tasks as the Technische Hochschule graduates (called "Diplomingenieuren") there have always been clear status differentials between the two groups. This is particularly marked in the public service, but in general Diplomingenieuren have higher salaries and are much more likely to reach higher management.

In the mid-1950s the apparent shortage of engineers, as articulated by industrial employers, led to a great expansion of the engineering schools. Student numbers rose from 38,000 in 1957 to 64,000 in 1968 (whilst numbers in the THs stayed constant at about 36,000) (1).

Further reforms took place in the latter-half of the 1960s, this time not in response to the demands of industry, but in the context of the general debate over the future structure of post secondary education. In this debate the views of student activists, academic teachers (and of advisory bodies such as the Wissenschaftsrat, with its Gesamthochschule proposals) played a major role. Reforms were carried out in spite of industrialists' fears of the over-intellectualisation of engineering training.

The Ingenieurschulen mostly became Fachhochschulen, with greater autonomy, more theoretical instruction, and a higher admission qualification. Thus, although the Abitur is not de jure necessary for admission, it is suggested that the growth of numerus clausus in the universities will soon make it a de facto requirement. There is also evidence from the first generation of Fachhochschule graduates (1973) that large numbers will continue with university studies (30 % in North Rhine-Westphalia: c.f. the French IUTs). This decision may well be a pointer to the career prospects of graduate engineers.

The same institutional upgrading has been achieved in the teaching field. Through the efforts of the primary school teachers' union the Pädagogische Hochschulen (in which primary school teachers are trained) have acquired a status equal to that of the universities (in contrast to the Fachhochschulen).

These initiatives make sense when the close, rigid interrelations of income, status, career chances and academic status obtaining in Germany are appreciated. In the public sector by law, and in the private sector by diffusion, university level qualifications traditionally permit access to superior, rigidly separate, opportunity/career structures and rewards. It follows that occupational associations whose interest is in the corporate status and income of their members, can well use what power they have to achieve university-level educational status. Much may follow, in the way of increasingly theoretical instruction, raising entry qualifications (though in the Pädagogische Hochschule

1) D. Goldschmidt and S. Hübner-Funk : "Von den Ingenieurschulen : Schritte zur Reform der Ingenieurausbildung", in Gutachten und Studien der Bildungskommission, Stuttgart, 1974.

case the Abitur was previously demanded, c.f. Colleges of Education in Britain which demand only 5 'O' levels), and the establishment of doctoral "programmes". Evolution in task structure, or occupational role, is of little consequence where occupational status and educational status are so rigidly stratified.

VII. CREDENTIALLING PROCESSES AND THEIR PATHOLOGIES

This paper has been an attempt to explain the success and the failings (pathologies) of credentialling processes in a variety of occupations and countries. Generalizations were sought by proceeding in parallel on two assumptions: that success/failure would be largely a result of the imperatives of knowledge/task structure (so that commonalities would more probably be found within an occupation between countries); and that success/failure would depend most particularly upon nationally-specific political/educational structures and values (so that commonalities would more probably be found within a country and between occupations).

A successful credentialling system was defined as one which guaranteed to society a supply of practitioners who are, and who remain, competent to carry out a certain range of jobs, and at reasonable cost to society. By contrast, failure was seen as commonly deriving either from a dissociation of credentials and competence (so that training programmes failed to develop necessary skills either because they were too 'academic' or because they had too little pedagogic value; or because skills were lost or became obsolete; or because access to the occupation or subsequent responsibilities/rewards depended on academic tests rather than professional ability, etc.), or because of inadequate supply, imbalance in distribution of practitioners, the excessive costs of services (perhaps imposed by monopoly fee-fixing), etc.

It should by now be clear that the generalisations which can be made are few and must at best be regarded as hypotheses : neither success nor any pathological trait typifies any one occupation cross-nationally nor any one country cross-occupationally. Nevertheless certain tentative findings do seem to emerge, even though regarded as hypotheses.

i) The social work example suggests that where the very nature of an occupational role is subject not only to negotiation or evolution, but to crisis, then this is reflected at the training level and in the debate about the proper structure of training. In the absence of a clear notion of 'role' it is difficult to say anything about what training is most appropriate.

ii) The nursing example is interesting in that the British and

American cases seem to manifest opposed 'credentialist' failings. In Britain, with the support of the occupational association, nursing training has been maintained in an apprenticeship mode, with clear pedagogic deficiencies (and a high drop-out rate). In the USA, again with the support of the occupational association, the tendency is toward increasingly academic instruction, with developing Masters' and doctoral programmes, quite independently of the needs of the job.

iii) Nursing in Britain also shows that avoidance of the common tendency to raise training-entry qualifications is no guarantee of an adequate supply of practitioners. Britain has both a severe shortage (and a static number of 'graduates') and much lower average entry qualifications (compared to university entrance) than Sweden or the USA.

iv) Nursing in the USA seems to suggest that where access to an occupation may be gained either through the university system or through special training schools, an informal stratification or hierarchy system is established within the occupation, corresponding to mode of access. This is so even if the professional grades are identical. Rather similar phenomena appear elsewhere (e.g. teaching in the UK). In some societies, notably Germany, this stratification may typically be formalised by the use of different grades, or titles (1).

v) In accountancy a university degree either is (Sweden) or is becoming (Britain, USA) essential for entry to what is becoming a 'postgraduate' profession. But the implications of this must differ between Britain and America partly because of the differential openness of the university systems, partly because whereas the British case seems mainly founded on status considerations (evidenced by the fact that the degree subject is not considered crucial), in America the tendency is to require a relevant degree, and hence to pass the burden for vocational training on to the universities.

vi) The three examples together show that concern with re-certification (the continuing assessment of competence) is rare.

vii) The national comparisons (section VI) show the influence of distinct historical traditions upon 'processes' taking place.

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1) The support given to this upgrading by occupational associations (e.g. primary school teachers) can be seen as a strategy based upon the economic and social advantages attaching to a university degree: advantages which in Germany often have legal support. In the engineering field, not only income and career opportunities, but titles (grades) are rigidly fixed by mode of access. In other words a stratification system (differential status and opportunity) that elsewhere (e.g. the American nursing example given earlier) is informal is here formalised on the basis of mode of access to the occupation - not of practical abilities. This is "credentialism" rooted in culture, and supported by law.

In Britain, the traditional apprenticeship mode of training, initiated by professional bodies in response to the earlier unresponsiveness of the formal educational system, is gradually coming to terms with the formal possibilities now available. This 'coming to terms' differs from one occupation to another, particularly as implied by the maintenance (or not) of traditional routes for those who may be denied, or may not wish, formal post secondary education.

viii) An inadequate supply of practitioners may be due to a variety of causes. In some cases (e.g. avocats in France) it may be a deliberate restriction imposed in its own interests by a powerful profession. In other cases an occupational association may be pressing for expansion of the scale of training (e.g. teachers in Britain). The determining factor may then be government policy or, in other cases (e.g. engineers in Britain), a lack of desire on the part of students to take up training places available.

ix) In Germany, occupational associations have traditionally had much less of a training/certifying function than in Britain. Training has often been the responsibility of vocational schools, certification has more often been reserved to the State (Länder). A very common tendency is the upgrading of these specialised schools to correspond increasingly, both in terms of the theoretical nature of instruction and entry qualifications, with the universities. (Engineering schools are a good example).

VIII. SUMMARY AND CONCLUSIONS

The service sector occupations (professions, semi-professions) offer a particular insight into credentialling processes, since they permit analysis of changing education demanded for the occupancy of specific social roles, and the 'political negotiation' of educational standards and processes. That is, the standards required for admission to such occupations, and the educational processes leading to the right to practice, are almost always 'negotiated' publicly between the interest groups concerned: occupational associations (e.g. professional bodies), the State, the educational institutions, and clients or employees. Moreover, in wealthy societies, the service sector is generally the most rapidly expanding economic sector; hence its demands are likely to have an increasing social importance for the labour market (and the educational system) of the future.

Since a major function of credentialling processes in this area is to guarantee competent performance within specific occupational

roles, it is possible to give a definition of a 'successful' credentialling process. Broadly, it should guarantee to society an adequate supply of practitioners who are, and who remain, available at reasonable cost competent to carry out a certain range of tasks. Equally, unsuccessful processes can be defined as those in which, for example, credentials do not correspond to competence for the task (e.g. because training is too academic, or because it provides no real instruction); or in which supply and cost do not correspond to social requirements (e.g. because an interest group is able to maintain supply at an inadequate level).

The present report attempts to examine a number of (largely) service occupations in a number of OECD countries (France, Germany, Sweden, UK, USA), taking into account location of occupational education/training (focusing upon the changing involvement of the formal post secondary education system); numerical growth of recruitment (and the factors determining growth); and changes in the formally prescribed minimum and actual educational qualifications of students admitted to training. With this information it is possible to gain more understanding of how people will select, and be selected for, an increasingly important set of occupational roles: that is, of how credentialling really works. Moreover, with the comparative data, and in terms of the notions outlined above, it becomes possible to judge 'success' and 'failure', and to seek similarities both within a given occupation in different societies, and between occupations in a given society.

A most important conclusion is that credentialling processes are everywhere dynamic; they are in process of change. These changes come about through the interaction of social, technological and economic transformations, and through changing aspirations, largely manifest in the continuing 'negotiation' of relevant interest groups. Characteristic of the 'negotiations' in these occupations is the involvement of powerful occupational associations (corresponding, in some ways to the role of trade unions in other spheres of employment and of educational institutions). But because the relative power of the interest groups concerned (e.g. occupational associations vis-à-vis the State) differs substantially both inter-occupationally and internationally there are significant differences in the changes now taking place. Moreover, it becomes apparent that occupational associations themselves are not always seeking the same sorts of ends or means. In other words, the common belief that these bodies seek to restrict entry and to promote incorporation of occupational training into the university system in order to increase occupational status is not altogether true. Some examples show that whilst these 'credentialist' traits are sometimes supported - and are certainly to be found - the situations are really much more complex.

Nursing provides one example. In the United States, with the support of the occupational association, training takes place increasingly through the formal post-secondary education system (both 4-year and 2-year colleges). The occupational association also supports the rapidly growing numbers of post-graduate nursing courses being offered. Admission requirements are rising, courses are becoming more and more academic. In Britain, the tendency is quite different. The occupational association has resisted suggestions (made by official committees of enquiry) that nurses' training be more integrated with other post-secondary education, and there is still a large element of 'cheap labour' in the on-the-job training which remains characteristic. Admission requirements have not risen (and are far below those for university entrance), although the educational attainment of entrants has risen slightly (as more and more children take GCE). Finally, numbers have not been held down: shrinking enrolments reflect lack of student interest in a nursing career. The criticism here is not that training is becoming too academic, but that it remains deficient in pedagogic terms.

In the legal profession the professional bodies commonly take a restrictive view: the French case study shows how numbers admitted are held down by professional control. In teaching the position is quite different. In Britain, for example, the teaching profession has resisted a policy of reducing admissions to teacher training (based on demographic projections), arguing instead on the basis of need to improve pupil-teacher ratios.

It is certainly true that there is a pronounced tendency to raise occupational training levels to university standard; it is combined with a corresponding rise in educational admission requirements. Accountancy in Britain, Sweden and the USA, architecture in Britain, engineering in Britain and Germany are examples. But the way in which this happens, the rationale, and the implications, differ from one country to another.

As far as procedures are concerned, much depends upon previous traditions of occupational training and upon general post-secondary education policies. Change may take the form of an upgrading of existing vocational schools towards parity with, but still outside, the university system (e.g. German engineering schools); or it may take the form of absorption of vocational schools into universities, to produce more integrated or comprehensive institutions (as seems to be happening in Sweden or in British teacher training); or it may be a process of formalisation of what had been entirely informal (apprenticeship) training within existing post-secondary institutions (e.g. accountancy in Britain).

Similarly, there are differences in the implications of these changes both for the openness of the occupation and for the appropriateness of the education which will be offered. It is over-simple to

maintain that there is a necessary reduction in access (in openness) or that education necessarily becomes over-academic. In judging such changes, the following factors have to be borne in mind:

- the adequacy of previous methods and institutions of training;
- the openness of the formal post-secondary education system in general;
- the maintenance (or non-maintenance) of alternative (subsidiary) modes of access;
- evolution in the role and tasks of the occupation and demands made upon it.

Many short-cycle (vocational) training schools are too small, restricted in scope, non-innovative, and under-financed. Equally, occupational preparation which is almost entirely 'on-the-job' - that is, wholly informal or non-institutionalised - may represent little more than a provision of cheap labour in return for little real instruction. Under these circumstances formalisation, greater integration with the higher educational system, would seem a valuable transformation. But, equally, these failings may not be present, and changes may indeed represent no more than a means of occupational status enhancement, a charge which has been levelled at engineering schools (Fachhochschulen) in Germany.

The implications of increasing reliance on the formal post-secondary education system (for the provision of occupational training) for the openness of the occupation depends upon various factors. A change of this kind may be more or less restrictive depending upon sex, class, ethnic or regional biases in university (and equivalent non-university institution) admission policies and upon the application or non-application of numerus clausus. For example, the implications of American accountants on the one hand, and British ones on the other, demanding a university degree as a qualification for admission are quite different. At the same time, it has to be borne in mind that whereas in some countries (e.g. Britain, France and Germany) universities are more restrictive and exigent in their demands than the non-university sector, in other countries (e.g. Norway, Sweden) it is often the vocational schools, not the universities, which impose the strict numerus clausus.

In the United Kingdom informal on-the-job training (usually including a part-time or day release element) provided a traditional mode of access to higher status occupations for those (often from the working class) who could not obtain, or did not wish, formal post-secondary education. There is little doubt that, in many countries, universities are regarded (often with support from the statistics) as essentially middle class institutions. If able young members of the working class were to feel themselves excluded from occupational training schemes now exclusively located within the universities, this would indeed be

a socially retrogressive step. The maintenance (or not) of these traditional routes, as an alternative to increasingly dominant academic routes, must be considered in judging the changes to which we have referred. Yet practice differs substantially. In Britain, where these informal or non-university modes of advancement have historically been of particular importance, one finds that in teaching and in engineering a variety of modes are to be maintained, whereas in architecture, admission will soon become "uniportal".

A further, though subsidiary, caveat must be entered at this point. This is best illustrated (from amongst the case-study material which is presented)by reference to nursing in America. Registration as a nurse (registered nurses being the senior grade) is possible through three quite distinct routes (4-year university degree course, 2-year community college associate degree course, or a 3-year hospital-based diploma course). This is indeed the plurality which is being recommended. Yet the fact is that stratification within the grade of registered nurse is firmly entrenched: those qualifying via the hospital-based nursing schools may be said to be "victimised by basic preparation". Despite their three-year nursing education, subsequent upward mobility within the occupation is frequently blocked unless they can obtain their bachelor's degree. And for those trained wholly by nursing personnel in hospital schools this requires a full four-year undergraduate course, with no credit given for practical experience and earlier training.

A final consideration in judging the social significance of the transformation of occupational training derives from tacit and overt changes in the nature of occupational roles and tasks. In Sweden, for example, it appears that changes in the nature of nursing-training are accompanied by important evolutions in the role of the nurse; nurses are beginning to carry out certain tasks previously (and elsewhere) reserved to doctors. Changes of this kind - that is, growing responsibilities - offer genuine justification for educational changes. By contrast, criticisms levelled at credentialist changes in American nursing education suggest that this justification is absent. This is a difficult consideration to bear in mind since evolutions in work, responsibilities and functions differ not only in extent and character between occupations, but also because they are generally so unclear.

On occasion the fundamental nature of the responsibilities and functions attaching to an occupation may be the subject not merely of evolution, but of public dispute. Social work, which seems everywhere to be in 'crisis', is the best case in point. The social work profession is sharply divided between those who see their chief responsibility as helping the deprived or inadequate individual, and those who see it as the transformation of a society producing deprivation and inadequacy. It is easy to argue that these rather different sorts of roles require

different sorts of educational preparation (for example, an emphasis on psychology, health care in the first case, sociology/political economy in the second). The very real disputes over the proper training of a social worker (in curriculum and in institutional terms), found even within the profession, in part reflect these disagreements. Status considerations are relevant too, of course, and do generally lead to professional demands for educational up-grading. In Germany, for example, social work training schools have been granted higher status and the training period has been lengthened. In Britain the profession seeks to limit its membership to those qualified within universities or polytechnics. In France, the integration, or not, of social work training schools into the university system is a matter of dispute, although 'integration' has powerful support. Though (or because) there has been a certain amount of such upgrading, social workers frequently feel that their status (in the eyes of others) does not correspond to the prolonged training which they have received. 'Enoblement' of education, without corresponding change in role and tasks, may not only detract from work effectiveness ; it may not even satisfy the status-aspirations which produce it.

In conclusion, the following points should be emphasised. There are widespread tendencies for educational standards (entry qualifications demanded, length of training) to rise, often as an objective of occupational associations, to university standard. Sometimes this is accompanied by a demand for integration with the formal post-secondary education system. There are tendencies for the numbers entering training to be held down (by professional associations where these have this power : but in other cases by student disinterest or government policy). Yet the fact is that in the occupations and countries considered, these traits are far from universal. They are not characteristic of any occupation nor of any one country. Moreover, this study has shown that the interpretation of 'credentialist' tendencies is far from straightforward, and must be informed by considerations discussed above.

'Credentialism', insofar as it characterises, and is characterised by, the examples considered in the present analysis, is not a single homogeneous phenomenon requiring a particular kind of ameliorative policy. Insofar as governments may need to develop policies relating to the kinds of occupations discussed, these will have to be specific and different. Nevertheless, though these policies will inevitably owe much to political negotiation, a view of what constitutes a successful credentialling process (based upon considerations of the public good), of inherent pathological tendencies, should inform debate.

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